

# **SPECIAL PROVISIONS & SUPPLEMENTAL SPECIFICATIONS**

CSI-Inch/Pound

Project No:	BRF-0137(5)2
Name:	Structure E-790 2 Mi East of Gunnison
	Bridge Replacement # E-790
County:	SANPETE
Bid Opening:	November 29, 2005
	Date



**2005 - U.S. Standard Units (Inch-Pound Units)** September 12, 2005

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|-----|--------|-------------------------|
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**I. 2005 Standard Specifications**

The State of Utah Standard Specifications for Road and Bridge Construction, U.S. Standard Units (Inch Pound Units), Edition of 2005 applies on this project as a static Specification Book as well as all other applicable specification changes.

Refer to Part XIII (Special Provisions and Supplemental Specifications) for other project specific specifications.

## II. List of Revised Standard Drawings

### Change One

Revised February 24, 2005

AT 1	Legend Sheet	02/24/2005
AT 2	Ramp Meter Details	02/24/2005
AT 3	Ramp Meter Sign Panel	02/24/2005
AT 5	Ramp Meter Loop Installation	02/24/2005
AT 6	Conduit Details	02/24/2005
AT 7	Polymer-Concrete Junction Box Details	02/24/2005
AT 8	ATMS Cabinet	02/24/2005
AT 9	ATMS Cabinet Disconnect And Transformer Frame	02/24/2005
AT 10	CCTV Mounting Details	02/24/2005
AT 11	CCTV Pole Details	02/24/2005
AT 12	CCTV Pole Foundation For Dedicated CCTV Pole	02/24/2005
AT 13	Deleted	N/A
AT 14	Weigh In Motion Piezo Details	02/24/2005
AT 15	RWIS Site And Foundation Details	02/24/2005
AT 16	RWIS Tower Base And Service Pad Layout	02/24/2005
AT 17	Ground Rod Installation And Tower Grounding	02/24/2005
AT 18	TMS Detection Zone Layout	02/24/2005
BA 3	Deleted	N/A
BA 3A	Cast In Place Constant Slope Barrier	02/24/2005
BA 3B	Precast Concrete Constant Slope Transition Section For Crash Cushion And W-Beam Guardrail	02/24/2005
BA 4B	W-Beam Guardrail Transition	02/24/2005
BA 4C	W-Beam Guardrail Transition Curb Section	02/24/2005
CC 7	Deleted	N/A
CC 7A	Grading And Installation Details Crash Cushion Type F Quad Trend 350	02/24/2005
CC 7B	Reserved For Future Use	N/A
CC 8	Deleted	N/A
CC 8A	Grading And Installation Details Crash Cushion Type G	02/24/2005
CC 8B	Grading And Installation Details For "3R" Projects Crash Cushion Type G	02/24/2005
CC 9A	Grading And Installation Details Crash Cushion Type H	02/24/2005
CC 9B	Grading And Installation Details Crash Cushion Type H (Parabolic Flare)	02/24/2005
DD 4	Geometric Design for Freeways (Roadway)	02/24/2005
FG 3	Swing Gates Type I For Gates Less Than 17'	02/24/2005
ST 5	Painted Median And Auxiliary Lane Details	02/24/2005

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### Change Two

Revised April 28, 2005

AT 4	Typical Ramp Meter Signal Head Mounting	04/28/2005
CB 1	Curb and Gutter Inlet	04/28/2005
CB 2	Open Curb Inlet	04/28/2005
CB 3	Shallow Catch Basin	04/28/2005
CC 8A	Grading And Installation Details Crash Cushion Type G	04/28/2005
CC 8B	Grading And Installation Details For "3R" Projects Crash Cushion Type G	04/28/2005
CC 9A	Grading And Installation Details Crash Cushion Type H	04/28/2005
CC 9B	Grading And Installation Details Crash Cushion Type H (Parabolic Flare)	04/28/2005
DD 4	Geometric Design for Freeways (Roadway)	04/28/2005
FG 4	Deleted	N/A
FG 4A	Deer Crossing Details	04/28/2005
FG 4B	Deer Ramp Details	04/28/2005
SL 12	Traffic Counting Loop Detector Details	04/28/2005
SL 13	Video Detection Camera Mount	04/28/2005
SN 8	Ground Mounted Timber Sign Post (P1)	04/28/2005
SN 11	Slipbase Ground Mounted Tubular Steel Sign Post (P4)	04/28/2005

### Change Three

Revised June 30, 2005

CB 5A	Standard Catch Basin and Cleanout Box	06/30/2005
GW 5A	Pedestrian Access	06/30/2005
GW 5B	Pedestrian Access	06/30/2005
GW 5C	Pedestrian Access	06/30/2005

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### Change Four

Revised August 25, 2005

BA 1B	Precast Concrete Full Barrier Standard Section	08/25/2005
BA 3B	Precast Concrete Constant Slope Transition Section	08/25/2005
	For Crash Cushion And W-Beam Guardrail	08/25/2005
BA 4B	W-Beam Guardrail Transition	08/25/2005
CC 7B	Crash Cushion Type F BEAT-SSCC	08/25/2005
DG 1	Fill Height for Metal Pipe (Steel)	08/25/2005
EN 1	Temporary Erosion Control (Check Dams)	08/25/2005
EN 2	Temporary Erosion Control (Silt Fence)	08/25/2005
EN 3	Temporary Erosion Control (Slope Drain And	
	Temporary Berm)	08/25/2005
EN 4	Temporary Erosion Control (Drop Inlet Barriers)	08/25/2005
EN 5	Temporary Erosion Control (Pipe Inlet And Curb	
	Inlet Barriers)	08/25/2005
EN 6	Temporary Erosion Control (Sediment Trap and	
	Stabilized Construction Entrance)	
EN 7	Temporary Erosion Control (Straw Bale Barrier)	08/25/2005
SL 14	Highway Luminaire Pole Ground Mount	08/25/2005
SL 15	Luminaire Slip Base Details	08/25/2005
SN 12A	Ground Mounted Sign Installation Details	08/25/2005

### **III. Materials Minimum Sampling and Testing**

**Follow the requirements of the Current Materials Minimum Sampling and Testing Manual:**

**Materials Minimum Sampling and Testing Manual reference can be found from the UDOT Web Site at:**

**<http://www.udot.utah.gov/index.php/m=c/tid=645>**





# NOTICE TO CONTRACTORS

Sealed proposals will be received by the Utah Department of Transportation UDOT/DPS Building (4th Floor), 4501 South 2700 West, Salt Lake City, Utah. 84114-8220, until 2 o'clock p.m. Tuesday, November 29, 2005, and at that time the download process of bids from the USERTrust Vault to UDOT will begin, with the public opening of bids scheduled at 2:30 for Bridge Replacement # E-790 of Structure E-790 2 Mi East of Gunnison in SANPETE County, the same being identified as Federal Aid Project No: BRF-0137(5)2.

**Federal Regulations:**

Wage Rate Non-Applicable.

**Project Location:** Structure E-790 2 Mi East of Gunnison

**The principal items of work are as follows (for all items of work see attachment):**

Box Culvert Barrel  
Structural Concrete(Est. Lump Qty: 43 cu yd)  
Traffic Control

**The project is to be completed:** in 60 Calendar Days.

**Other Requirements:**

All project bidding information, including Specifications and Plans, can be viewed, downloaded, and printed from UDOT's Project Development Construction Bid Opening Information website, <http://www.udot.utah.gov/index.php/m=c/tid=319>. To bid on UDOT projects, bidders must use UDOT's Electronic Bid System (EBS). The EBS software and EBS training schedules are also available on this website.

Project information can also be reviewed at the main office in Salt Lake City, its Region offices, and its District offices in Price, Richfield, and Cedar City.

Project Plans cannot be downloaded or printed from the website unless your company is registered with UDOT. Go to UDOT's website to register. Unregistered companies may obtain a **CD**, that contains the Specifications and Plans, from the main office, 4501 South 2700 West, Salt Lake City, (801) 965-4346, for a fee of \$20.00, plus tax and mail charge, if applicable, none of which will be refunded.

As required, a contractor's license must be obtained from the Utah Department of Commerce.

Each bidder must submit an electronic bid bond from an approved surety company using UDOT's Electronic Bid System (EBS); or in lieu thereof, cash, certified check, or cashier's check for not less than 5% of the total amount of the bid, made payable to the Utah Department of Transportation, showing evidence of good faith and a guarantee that if awarded the contract, the bidder will execute the contract and furnish the contract bonds as required.

The right to reject any or all bids is reserved.

If you need an accommodation under the Americans with Disabilities Act, contact the Construction Division at (801) 965-4346. Please allow three working days.

Additional information may be secured at the office of the Utah Department of Transportation, (801) 965-4346.

**Dated this 05th day of November, 2005.**

**UTAH DEPARTMENT OF TRANSPORTATION**  
**John R. Njord, Director**

**Revised Date:**

# Utah Department of Transportation Bidder's Schedule

**Bid Opening Date:** 11/29/2005

**Region:** REGION 4

**Project Number:** BRF-0137(5)2

**County:** SANPETE

**Project Name:** Structure E-790 2 Mi East of Gunnison

**Concept:** Bridge Replacement # E-790

**Funding:** FEDERAL

**Bid Items Version#:** 1

**DBE Goal:** 0.00%

#	Item	Description	Quantity	Unit
<b>10 - ROADWAY</b>				
1	012850010	Mobilization	1	lump sum
2	013150010	Public Information Services	1	lump sum
3	01554005P	Traffic Control	1	lump sum
4	015720020	Dust Control and Watering	41	1000 gallons
5	01721010*	Survey	1	lump sum
6	020560015	Granular Borrow (Plan Quantity)	560	cubic yard
7	022210075	Remove Guardrail	206	foot
8	022210080	Remove Fence	65	foot
9	023160020	Roadway Excavation (Plan Quantity)	718	cubic yard
10	027210080	Untreated Base Course 3/4 inch or 1 inch Max (Plan Quantity)	193	cubic yard
11	02741060P	HMA - 3/4 inch	271	ton
12	02765050*	Pavement Marking Paint	13	gallon
13	028410010	W-Beam Guardrail	188	foot
14	028410066	W-Beam Guardrail Nested - various spans	100	foot
15	028410090	W-Beam Guardrail Anchor Type 1	2	each
16	028420010	Delineator Type I	2	each
17	028910290	Relocate Sign Greater Than or Equal to 20 Square Feet	1	each
18	029110010	Wood Fiber Mulch	1	acre
19	029120050	Strip, Stockpile, and Spread Topsoil (Plan Quantity)	1920	square yard
20	029220030	Broadcast Seed	1	acre

## 20 - STRUCTURES

Description: Box Culvert E-2536

21	022210020	Remove Box Culvert	1	each
22	02645000*	Box Culvert Barrel	1	lump sum
23	032110010	Reinforcing Steel - Coated	5193	pound
24	03310010P	Structural Concrete(Est. Lump Qty: 43 cu yd)	1	lump sum

\*Note: Item numbers ending with "\*" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

## **VI. Measurement and Payment**

## Measurement and Payment

### BRF- 0137(5)2

The Department will measure and pay for each bid item as detailed in this section. Payment is contingent upon acceptance by the Department.

Items are listed by Specification and in tables as follows:

Item #	Bid Item Number	Bid Item Name	Unit of Measurement and Payment
Additional information goes here.			

<b>1</b>	<b>012850010</b>	<b>Mobilization</b>	<b>Lump sum</b>
	<b>Payment</b>	<b>Amount Paid</b>	<b>When Paid</b>
	First	The lesser of 25% of Mobilization or 2.5% of contract	With first estimate
	Second	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 5% of contract
	Third	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 10% of contract
	Fourth	The lesser of 25% of Mobilization or 2.5% of contract	With estimate following completion of 20% of contract
	Final	Amount bid in excess of 10% of contract price.	Project Acceptance-Final

<b>2</b>	<b>013150010</b>	<b>Public Information Services</b>	<b>Lump Sum</b>
	<b>Payment</b>	<b>Amount Paid</b>	<b>When Paid</b>
	First	25% of bid item amount	With first estimate
	Second	Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

<b>3</b>	<b>01554005P</b>	<b>Traffic Control</b>	<b>Lump Sum</b>
	<b>Payment</b>	<b>Amount Paid</b>	<b>When Paid</b>
	First	25% of the bid item amount	With first estimate
	Second	Remaining portion of bid item paid as a percentage of the contract completed	With each estimate
Includes installation, maintenance, and removal of all temporary signs. Provide and maintain 2-VMS for up to 3 weeks.			

<b>4</b>	<b>015720020</b>	<b>Dust Control and Watering</b>	<b>1000 Gallon</b>
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<b>5</b>	<b>01721010*</b>	<b>Survey</b>	<b>Lump sum</b>
	<b>Payment</b>	<b>Amount Paid</b>	<b>When Paid</b>
	First	25% of the bid item amount	When the project is 5% complete
	Second	A total of 40% of bid item amount	When the project is 10% complete
	Third	A total of 75% of bid item amount	When the project is 50% complete
	Fourth	A total or 90% of bid item amount	When the project is 75% complete
	Fifth	The Department retains the remaining 10 percent of bid item amount until the project is completed and the red-lined hard copy plan set showing as-constructed features denoting changes from the original design is provided to the Engineer and verified complete.	

<b>6</b>	<b>020560015</b>	<b>Granular Borrow (Plan Quantity)</b>	<b>Cubic Yard</b>
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<b>7</b>	<b>022210075</b>	<b>Remove Guardrail</b>	<b>Feet</b>
Includes posts, crash cushions, transition elements, and anchorages			

<b>8</b>	<b>022210080</b>	<b>Remove Fence</b>	<b>Feet</b>
Removed			

<b>9</b>	<b>023160020</b>	<b>Roadway Excavation (Plan Quantity)</b>	<b>Cubic yard</b>
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<b>10</b>	<b>027210080</b>	<b>Untreated Base Course 3/4 inch or 1 inch Max (Plan Quantity)</b>	<b>Cu Yd</b>
In place			

<b>11</b>	<b>02741060P</b>	<b>HMA - 3/4 inch</b>	<b>Ton</b>
Includes aggregates, asphalt binder, hydrated lime, tack coat, other additives, etc.			

<b>12</b>	<b>02765050*</b>	<b>Pavement Marking Paint</b>	<b>Gallon</b>
The Department will not pay for removal of unauthorized, smeared, or damaged markings.			

<b>13</b>	<b>028410010</b>	<b>W-Beam Guardrail</b>	<b>Feet</b>
In place, includes standard W-beam guardrail.			

<b>14</b>	<b>028410066</b>	<b>W-Beam Guardrail Nested - Various Spans</b>	<b>Feet</b>
In place, includes additional rail elements and CRT posts and blocks with banding when required and barrier reflectors.			

<b>15</b>	<b>028410090</b>	<b>W-Beam Guardrail Anchor Type 1</b>	<b>Each</b>
In place. Includes 12½ ft rail element, end section, one standard wood post, one shortened wood post with foundation tube, and hardware.			

<b>16</b>	<b>028420010</b>	<b>Delineator Type I</b>	<b>Each</b>
In place			

<b>17</b>	<b>028910290</b>	<b>Relocate Sign Greater Than or Equal to 20 Square Feet</b>	<b>Each</b>
Includes removal and disposal of existing concrete sign base.			

<b>18</b>	<b>029110010</b>	<b>Wood Fiber Mulch</b>	<b>Acre</b>
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<b>19</b>	<b>029120050</b>	<b>Strip, Stockpile, and Spread Topsoil (Plan Quantity)</b>	<b>Square Yard</b>
In place			

<b>20</b>	<b>029220030</b>	<b>Broadcast Seed</b>	<b>Acre</b>
In place			

<b>21</b>	<b>022210020</b>	<b>Remove Box Culvert</b>	<b>Each</b>
Removed			

<b>22</b>	<b>02645000*</b>	<b>Box Culvert Barrel</b>	<b>Lump</b>
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<b>23</b>	<b>032110010</b>	<b>Reinforcing Steel - Coated</b>	<b>Pound</b>
<b>Measurement:</b> Per plan quantity. 1. Do not include the mass of the coating or the specified test bars as computed weight. 2. Department will not make allowances for extra reinforcing steel required to provide lap splices that are requested by the Contractor. 3. Department will not make allowances for clips, chairs, wire, or other materials used for fastening reinforcement in place. 4. This item's quantity does not include the quantity for Box Culvert Barrel.			

<b>24</b>	<b>03310010P</b>	<b>Structural Concrete (Est. Lump Qty: 43 cu yd)</b>	<b>Lump</b>
<b>Measurement:</b> A. When the Contract provides a lump sum bid, the quantities shown on the plans are estimated quantities			

- only, and are not to be used as exact quantities.
- B. When the contract provides measurement per cubic yard, measure quantities by the dimensions shown.
- C. Use the prismoidal formula when the method of average end areas is not sufficiently accurate.
- D. Do not measure concrete required to fill over breakage of excavation for footings, walls, or slabs.
- E. Department will not deduct for volume occupied by pipes (other than culverts), reinforcing steel, piles, metal grillage, anchors, conduits, or weep holes.
- F. This item's quantity does not include the quantity for Box Culvert Barrel.

#### Payment

- A. Department will pay for reinforcing steel for structures separately, unless otherwise noted.
- B. Department will pay separately for concrete placed in individual structures containing less than 8 yd<sup>3</sup> at the bid price per cubic yard for Concrete, Small Structure.
- C. Department will make no separate payment for excavation for structures.
- D. Department will adjust prices as follows when the Contract provides for concrete structures as a lump sum:
  - 1. If the Engineer increases or decreases the quantity of concrete:
    - a. Unit price will be determined by dividing the contract lump sum price of that item by the estimated quantity of concrete as shown on the plans.
    - b. The contract lump sum price will be adjusted by an amount equal to the product of the change in quantity and computed unit price.
  - 2. If the estimated quantity of concrete as shown is in error by more than 10 percent:
    - a. The contract lump sum price will be increased or decreased by an amount equal to the product of the unit price determined in accordance with the previous line of this paragraph and the difference between the corrected quantity and the estimated quantity.
- E. Concrete Slope Protection: If preparation of the existing subgrade requires excavation or backfilling in excess of the 3-1/2 inches average depth beyond the slope at bid time, Department will pay per Section 01282.
- F. Payment includes all material to place underdrains.
- G. Payment includes all connection loops, threaded steel anchors and threaded inserts.
- H. Payment includes all work, equipment and materials for saw cutting.
- I. Structural Concrete may be accepted at a reduced price when the concrete strength is below that specified.
  - 1. The Department applies the pay factor to the Structural Concrete with strength tests falling below that specified.
  - 2. The Department calculates the pay factor as follows:
 

<b>psi below specified strength:</b>	<b>Pay Factor:</b>
1-80	0.90
80-160	0.80
160-240	0.70
240-320	0.60
320-400	0.50
More than 401	Reject, remove and replace
- J. Payment includes all work and materials to place waterproofing membrane over construction phase joint.

**VII. Use of Minority or Women Owned Banks**

**SPECIAL PROVISION**

**In the spirit of Federal Department of Transportation regulations the Utah Department of Transportation encourages all contractors and suppliers to thoroughly investigate the services offered by banks controlled and/or owned by minorities or women and to utilize their services as deemed feasible.**



**VIII. Bid Conditions**  
**DISADVANTAGED BUSINESS ENTERPRISE (DBE)**

**POLICY**

**“Policy Statement”**

It is the policy of the DEPARTMENT to take all necessary and reasonable actions to ensure that DBEs as defined herein shall have equal opportunity to participate in the performance of contracts financed in whole or in part with US Department of Transportation (DOT) funds under this agreement as modified herein.

**“Objectives”**

The objectives of this policy are to:

1. Ensure nondiscrimination in the award and administration of DOT assisted contracts;
2. Create a level playing field on which DBEs can compete fairly for DOT assisted contracts;
3. Ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. Ensure that only firms that fully meet *49 CFR 26* eligibility standards are permitted to participate as DBEs;
5. Remove barriers to the participation of DBEs in Federal aid contracts;
6. Assist the development of firms that can compete successfully in the marketplace outside the DBE program; and
7. Provide appropriate flexibility in establishing and providing opportunities for DBEs.

**“Responsibilities”**

Implementation of the DBE Program is accorded the same priority as compliance with all other legal obligations incurred by the DEPARTMENT in financial assistance agreements with DOT.

1. The Civil Rights Manager shall be the DBE liaison officer, who shall have direct, independent access to the Executive Director concerning DBE program matters. The Civil Rights manager shall be responsible for implementing all aspects of the DBE program. Adequate staff will be assigned to administer the DBE program.

2. The ENGINEER is responsible for supervision of the DBE participation covered by the Contract.

### **DBE BID AND PERFORMANCE CONDITIONS**

#### **“Obligations”**

The contractor, subcontractor, service provider, or supplier at any lower tier shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the DEPARTMENT deems appropriate.

#### **“Assurances”**

Each contract between the DEPARTMENT and the Contractor and each subcontract at any lower tier must include the following assurance:

The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the DEPARTMENT deems appropriate.

#### **A. CONTRACT GOAL**

1. The DEPARTMENT has determined that one or more can reasonably be expected to compete for the work contained in the proposal for this project. It is, therefore, the goal of the DEPARTMENT that DBE firms shall have an affirmative action opportunity to contract for the following percentage of work under this contract:
  - a. If the indicated DBE percent of the *CONTRACT DBE GOAL* is greater than 0.0 percent, complete Part A of the DBE BID ASSURANCE. Refer to Bidding Requirements, Section D, Subsection 1,a, of this Special Provision. (The commitment dollar amount up to the amount of the assigned goal is Race Conscious DBE participation. Any commitment dollar amount in excess of the assigned goal is Race Neutral Participation.)

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- b. If the indicated DBE percent of the *CONTRACT DBE GOAL* is 0.0 percent complete Part B of the DBE BID ASSURANCE. Refer to Bidding Requirements, Section D, Subsection 1,b, of this Special Provision. (Any commitment to a DBE is Race Neutral Participation.)

**CONTRACT DBE GOAL:**     0     **Percent**

### 2. GOALS

#### a. GOAL FOR BID EVALUATION

The above entered DBE percentage is a goal for bid evaluation to determine responsiveness of the proposal as it relates to this specification. Percentages for bidding purposes shall be calculated using dollar values and quantities as shown in proposals received for this project. Bidders shall compute the percentage of their DBE commitment by dividing the dollar amount of subcontract work that is being committed to certified DBE firms by the total dollar amount of the proposal. This will be the percentage of their DBE commitment to be used by the Electronic Bidding System (EBS) software.

#### b. RACE CONSCIOUS GOAL

DBE participation on projects that are assigned a Goal for Bid Evaluation that is greater than 0.0 percent is *race conscious* and the DBE commitment becomes a contract specification upon award. The Bidder must submit with its Bid Proposal a *DBE Commitment*, prepared within the EBS software, that indicates:

- (1) Name of DBE firm
- (2) Work items to be performed
- (3) Total dollar amount of commitment

If the DBE commitment does not meet or exceed the assigned goal, the Bidder must submit with the Bid Proposal documentation of good faith efforts.

c. RACE NEUTRAL GOAL

DBE participation on projects that are assigned 0.0 percent Goal for Bid Evaluation is *race neutral* and does not become a contract specification upon award. The Bidder must take equal opportunity action to allow DBEs to compete for and perform on subcontracts. Only work classifications that the Bidder will subcontract need to be considered in evaluating equal opportunity action in the bid preparation. Contacts that have been made with DBE firms regarding potential work to be subcontracted and the results of such contacts are to be submitted with the EBS prepared Bid Proposal in *Race Neutral DBE Documentation* which contains:

- (1) The work classifications that will be subcontracted.
- (2) DBE firms contacted.
- (3) Result of contact
- (4) Name of anticipated DBE subcontractor(s)
- (5) Anticipated work items to be performed by DBEs.
- (6) Anticipated dollar amount of subcontract(s).

NOTE: In the EBS (Electronic Bidding System):

Use the Quote Comparison to document item (1).

Use the DBE Contact Log to document items (2) and (3).

Use the DBE Commitment to document items (4), (5), and (6).

The *Race Neutral DBE Documentation* is required to document equal opportunity action and to assist UDOT with DBE reporting and DBE goal setting. Use the EBS functions in above NOTE as the Race Neutral DBE Documentation.

d. GOAL FOR CONTRACT PERFORMANCE

The Bidder's *DBE Commitment* becomes an attachment to the Bid Proposal and is a condition of award, and thereby becomes a contract specification. Upon award, this Race Conscious DBE Commitment also becomes the minimum goal for contract performance.

Commitments to DBEs that exceed the Goal for Bid Evaluation will be considered as both race conscious and race neutral. The dollar amount of the Goal for Bid Evaluation will be considered to be race conscious participation. Any dollar amounts in excess of the Goal for Bid Evaluation will be considered as race neutral participation.

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It is the intent of this Special Provision that the DBE Firm(s) listed for *race conscious* participation, as a minimum level of participation, will perform to the extent indicated in the Bidder's DBE Commitment. The minimum level of DBE participation includes:

- (1) Indicated DBE firm(s),
- (2) Indicated work item(s) (bid items),
- (3) Indicated total dollar amounts.

Listed bid items shall be considered to be committed in their entirety unless Bidders designate otherwise in their DBE Commitment. If the DBE will perform only a part of the bid item, i.e., haul only, the Bidder must indicate what part the DBE will perform (Partial Performance). If the DBE will perform only a part of the quantity of the bid item, the Bidder must indicate the estimated quantity of the work to be performed by the DBE (Partial Quantity).

*Substitutions of DBE subcontractor(s), work item(s), or decreases of total dollar amount(s)* as indicated in the Bidder's DBE Commitment will not be allowed without prior submission of written justification to the ENGINEER and approval of the ENGINEER and the Civil Rights Manager.

After award of a contract, substitutions will not be allowed without prior submission of a written "hold harmless" statement from the DBE.

Any change by the Contractor in the DBE Commitment requires that the change is approved by a Change Order.

Substitution of race neutral participation in excess of the Goal for Bid Evaluation requires equal opportunity efforts to substitute with other DBE participation.

*DEPARTMENT generated decreases due to quantity changes in individual bid items do not require prior approval of the Civil Rights Manager—but must be fully justified by the ENGINEER at the conclusion of the project in the Explanation of Overruns and Under-runs Statement. The ENGINEER’S justification shall show the total estimated quantity, the final pay quantity as shown on the final estimate invoice, the quantity of the under-run, and the percent of under-run of the individual item. The explanation for the under-run shall include the reasons for the under-run and shall include as much detail as possible.*

e. GOAL FOR FINAL COMPLIANCE

Percentages for final compliance shall be based on actual payments to DBEs. Over-runs and under-runs in individual contract items may require adjustments in the predetermined DBE percentage for a project if those items were not related to DBE performance. “The predetermined percentage for a project” refers to the percentage of the Contractor's DBE Commitment that becomes a contract specification upon award.

B. DEFINITIONS

For the purpose of this Special Provision, the following terms are defined:

1. Contract means a legally binding relationship obligating a seller to furnish supplies or services including but not limited to, construction and professional services) and the buyer to pay for them.
2. Contractor means one who participates, through a contract or subcontract (at any tier).
3. Disadvantaged Business Enterprise or DBE means a for profit small business concern.
  - a. That has been certified to DBE status by the UUCP.
  - b. That is at least 51 per cent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 per cent of the stock of which is owned by one or more such individuals; and
  - c. Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
  - d. Whose size is limited to average annual gross receipts of \$17,425,000 over the previous three fiscal years. The Secretary of Transportation may adjust this amount from time to time for inflation.

OR

Whose size is limited to the current SBA Business size standard(s) found in 23 CFR part 121 appropriate to the type(s) of work the firm seeks to perform in DOT-assisted contracts.

4. DBE Goals mean:

- a. UDOT's annual overall goal on DOT-assisted projects for Federal fiscal year
- b. 2005 is 8.9 percent. 3.9 percent of the overall goal is a race neutral goal and reflects the level of DBE participation that would be expected absent the effects of discrimination. There is an implied DBE goal on projects with no goals (0.0 percent) that have subcontracting opportunities. The implied goal is the percent achievable by equal opportunity efforts.
- c. 5.0 percent of the goal is a race conscious goal and reflects the level of DBE participation that will be achieved in response to assigned DBE goals.

5. DBE Joint Venture means an association of a DBE firm and one or more other firms to carry out a single, for profit business enterprise, for which the parties combine their property, capital, efforts, skills, and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture to a degree commensurate with its ownership interest.

The DEPARTMENT's Civil Rights Office prior to bid opening must approve a DBE joint venture in order to be utilized for the satisfaction of contract DBE goals. A DBE Joint Venture application must be submitted allowing ample lead-time for the Civil Rights Office to review, evaluate, and verify information provided for in the application. An interview of the applicant may be necessary at the discretion of the DEPARTMENT prior to approval of the application. If an interview is deemed necessary it will be scheduled at the convenience of all parties.

6. Equal Opportunity Action requires individuals to be considered on the basis of individual capacities and not on the basis of any characteristics generally attributed to the group.

If a bidder requests or accepts bids for subcontract work, the bidder will request and accept bids from DBEs in the work classifications that potentially will be subcontracted.

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7. Good Faith Efforts means efforts to achieve a DBE goal or other requirements of this part that by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirements.
8. Lack of Financial Fitness is a performance-based definition based solely on failure to pay promptly. There is no reference to financial status or financial capability.
9. Prompt Payment means payment made no later than ten (10) work days after receipt of payment by the Contractor or Subcontractor, Service Provider or Supplier at any lower tier.
10. Race Conscious measure or program is focused specifically on assisting only DBEs, including women-owned DBEs. UDOT must establish contract goals to meet any portion of its overall DBE goal that it does not project being able to meet using race neutral means. To ensure that the DBE program continues to be narrowly tailored to overcome the effects of discrimination, UDOT must adjust the use of contract goals as follows:
  - a. If during the course of any year it is determined that the overall goal will be exceeded, UDOT will reduce or eliminate the use contract goals to the extent necessary to ensure that the use of contract goals does not result in exceeding the overall goal.
  - b. If it is determined that UDOT will fall short of its overall goal, then appropriate modifications in the use of race neutral and/or race conscious measures will be made to allow UDOT to meet the overall goal.
11. Race Neutral measure or program is one that is, or can be, used to assist all small businesses. UDOT must meet the maximum feasible portion of its overall DBE goal by using race -neutral means of facilitating DBE participation. Race neutral DBE participation includes:
  - a. Any time a DBE wins a prime contract through customary competitive procurement procedures,
  - b. Is awarded a subcontract on a prime contract that does not carry a DBE goal,
  - c. Is awarded a subcontract from a prime contractor that did not consider its DBE status in making the award even if there is a DBE goal.For the purposes of this part, race-neutral includes gender-neutrality.



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12. Regular Employee is a person who:
- a. Would be working for the DBE firm on any other subcontract with any other contractor.
  - b. Is a permanent employee of the DBE firm
- Or
- Has been recruited through the traditional recruitment and/or employment centers
- c. Has not recently been employed by the prime contractor on the present project, another subcontractor on the present project, or the renter-lessor of equipment being used on the present project.
  - d. Is not a member of a construction crew that regularly works for a non-DBE.
  - e. Is not a licensed contractor who is at the time “unemployed” or “between jobs.”
13. Regular Equipment is owned or leased and operated on a long term agreement and not on an *ad hoc* or contract by contract agreement.
- a. The equipment would be used by the DBE firm on any other subcontract with any other contractor.
  - b. The equipment would be owned by the DBE firm.
- Or
- The equipment would be leased/rented from traditional equipment lease/rental sources.
- c. The DBE firm would have a rental/lease agreement for any rented or leased equipment.
  - d. The equipment cannot belong to:
    - (1.) Prime Contractor
    - (2.) Another subcontractor on the present project.
    - (3.) Supplier of materials being installed by the DBE firm.
  - e. The equipment cannot come from another contractor fully operated.

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### 14. Reasonable Bid

This is a bid the DEPARTMENT would accept if it were the only bid submitted. Generally, this is a bid within 10 percent of the Engineer's Estimate.

### 15. Responsible Bidder

A responsible bidder has the apparent ability and capacity to perform the contract requirements.

In addition to normal prequalification, a responsible bidder is defined as one who has signed (manually or electronically) and submitted with the bid the DBE Bid Conditions Assurance of good faith effort included as Part I of this Special Provision certifying the intention to meet the DBE goal of a proposed contract or to continue good faith effort to do so. These goals may be met by subcontracting or leasing contracts with a DBE or purchasing material from a DBE insofar as the work or material becomes a part of a proposed contract.

### 16. Responsive Bidder

- a. A responsive bidder is a bidder who unequivocally offers to provide services or supplies in conformity with the material terms of the solicitation. In addition to normal prequalification and other bidding requirements, a responsive bidder in relationship to this Special Provision is defined as one who submits evidence of proposed subcontract performance with certified DBE firms to achieve the required dollar amount necessary to achieve the percentage goal.
- b. Bidders may be considered as presumptively responsive if they have failed to satisfy the advertised DBE goal set for the proposed contract but have certified in their bid that good faith efforts have been expended to meet the goal and that they will continue during the performance of the contract to locate, solicit, and involve DBE firms in contract performance. Documentation of the bidder's good faith efforts must be included with the bid package of the DEPARTMENT's review and assessment. Failure to do so shall render the bid non-responsive. The DEPARTMENT will reject the bid.

### 17. Satisfactory Completion of a subcontract occurs when:

- a. The subcontractor has satisfactorily completed in all respects the work under the Contract.
- b. The Contractor and the subcontractor have notified the ENGINEER in writing that the work of the subcontractor has been completed.

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- c. The Engineer will be given a reasonable length of time to check quantities if necessary. Checking quantities does not guarantee the absolute correctness of quantities.
  - d. The Contractor and the subcontractor have satisfactorily executed and delivered to the ENGINEER all documents, certificates and proofs of compliance required by the Contract. The satisfactory execution and delivery of these documents, certificates and proofs of compliance to the ENGINEER is a material requirement of the contract.
  - e. The ENGINEER accepts in writing the work of the subcontract.
  - f. Satisfactory Completion refers only to payment of retainage and accrued interest. A determination of Satisfactory Completion and payment in full for work performed does not relieve the contractor nor the subcontractor from any contractual obligation.
18. Satisfactory Performance means work performed and materials furnished in conformity with the plans and specifications.
19. Service Provider means a broker or a middle man. A business person who buys, sells or performs a service for another in exchange for a mark up or commission.
20. Socially and Economically Disadvantaged Individuals means any individual who is a citizen (or lawful admitted permanent resident) of the United States and who is:
- a. Any individual who the DEPARTMENT finds to be a socially and economically disadvantaged individual on a case-by-case basis.
  - b. Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
    - (1) “Black Americans,” which includes persons having origins in any of the black racial groups of Africa;
    - (2) “Hispanic Americans,” which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American or other Spanish or Portuguese culture or origin, regardless of race;
    - (3) “Native Americans,” which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;

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- (4) “Asian-Pacific Americans,” which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands, (Republic of Palau), the Commonwealth of the Northern Mariana Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
- (5) “Subcontinent Asian Americans,” which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.
- (6) Women.
- (7) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

### 21. Subcontractor

A subcontracting arrangement is generally considered to exist when a person or firm assumes an obligation to perform a part of the contract work and the following conditions are present.

- a. The person or firm performing the work is particularly experienced and equipped for such work.
- b. Compensation is related to the amount of work accomplished rather than being on an hourly basis.
- c. Choice of work methods, except as restricted by the specifications, and the furnishing and controlling of labor and equipment are exercised by the subcontractor with only general supervision being executed by the prime contractor.
- d. Personnel involved in the operation are under the direct supervision of the subcontractor and are included on the subcontractor's payroll.

All conditions involved shall be considered and no one condition alone will normally determine whether a subcontract actually exists. In all cases, a DBE subcontractor must be an independent organization, and the ownership and control by the socially and economically disadvantaged individual(s) must be real and continuing. The prime contractor, a subcontractor, or a supplier shall not be responsible for the various operating and management activities of a DBE firm.

22. Supplier

Provides or furnishes materials, goods or services that may be incorporated into the project. The supply transaction is to be documented by an appropriate purchase agreement that includes the required provisions for Federal-aid construction projects.

23. UUCP The Utah Unified Certification Program (UUCP) provides “one-stop shopping” to applicants for DBE certification, such that an applicant is required to apply only once for a DBE certification that is honored by all recipients of Federal-aid Funds in the State of Utah.

C. DETERMINATION OF DBE CONTRACTOR’S ELIGIBILITY BY UUCP

1. Any Contractor may apply to the UUCP for status as a DBE. Applications shall be made on forms provided by the UUCP, entitled “UNIFORM CERTIFICATION APPLICATION” or “Information for Determining DBE Joint Venture Eligibility,” Form No. R-817. Application need not be made in connection with a particular bid. Only work contracted to certified DBE prime contractors or subcontractor to firms that have applied for and have been granted status as a DBE by the UUCP shall be considered toward contract goals as established in Subsection A.
2. It shall be the Contractor’s responsibility to submit a DBE application so that the UUCP has time to review it. The UUCP will review applications in a timely manner but is not committed to approve DBE status within any given period of time. The UUCP must have ample lead time to review, evaluate, and verify information provided with a application.
3. The DEPARTMENT shall maintain a UUCP Unified DBE Directory of DBE Contractors, vendors, service providers and suppliers that is updated as changes occur for the purpose of providing a reference source to assist any bidder in meeting the requirements of this bid condition. Bidders must use the most current DBE information available on the web site when submitting bids. A current UUCP DBE directory representing certified DBE Contractors is available through the UDOT Civil Rights Office, and also on the Internet at (click on this link):

<http://www.udot.utah.gov/index.php?m=c&tid=198>

An electronic file of the UUCP DBE Directory is available for downloading to use in the Electronic Bidding System (EBS) at the following URL (click on this link):

<http://www.udot.utah.gov/index.php/m=c/tid=317>

4. In meeting the requirements of this bid condition, bidders are in no way limited to the DBE Directory referred to in 3 above in seeking out and negotiating with the DBE Contractors and determining which items of work shall be subcontracted to DBE Contractors. Bidders shall exercise their own judgments in selecting any subcontractor to perform any portion of the work.

The UUCP prior to bid opening must grant DBE status to any DBE Contractor or DBE Joint Ventures. DBE credit will not be allowed toward *race conscious* goals for a firm or joint venture that has not been DBE certified by the UUCP.

D. BIDDING REQUIREMENTS

All bidders must satisfy the bidding requirements of this part. A DBE prime contractor's performance does not count toward fulfilling the DBE goal. A prime bidder who is a DBE contractor shall meet the DBE goal by using DBE subcontractors or by using good faith efforts.

1. DBE Bid Assurance
  - a. Race Conscious Goal

For a bid with a DBE goal greater than 0.0 percent to be considered responsive, *Part A* of the DBE Bid Assurance must be completed and included in the BID PROPOSAL, certifying that they will meet or exceed the Goal for Bid Evaluation established in Subsection A, or that they fail to meet the goal but have and will put forth good faith effort to meet or exceed the goal of the DBE program. *The EBS software based upon the entry of the DBE Commitment and/or the Good Faith Documentation into EBS will complete part A of the DBE Bid Assurance.* In either event, the Contractor shall continue efforts to consider and utilize DBE firms during the performance of the contract.
  - b. Race Neutral Goal

For a bid with a DBE goal of 0.0 percent to be considered responsive, *Part B* of the DBE Bid Assurance must be included in the BID PROPOSAL certifying that the Bidder has utilized equal opportunity action to allow DBE's to compete for and perform on subcontracts. *Part B* of the DBE Bid Assurance will be completed based upon the following information entered into EBS:

    - (1) Bids with no subcontracting opportunities

Bidders who intend to do all the work with their own organization will indicate this in EBS on the Bid Submission Checklist and Forms window. EBS will subsequently indicate on Part B of the DBE Bid Assurance that the Bidder does not intend to sublet a portion of the contract work.

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After the award of the bid, in the event that a Contractor indicates that he does not intend to sublet any work and subsequently determines to sublet a portion of the work, the Contractor:

- (a) must justify why subcontract quotes were not a part of the Bid Proposal,
- (b) must utilize equal opportunity action to allow DBEs to compete for and perform on the work to be sublet,
- (c.) must submit the required Race Neutral Documentation with the proposed subcontract.

NOTE: The Contractor may use the 'DBE Contact Log' and 'Quote Comparison' functions in EBS to develop the above requirements for documentation.

- (2.) Bids with subcontracting opportunities  
Race Neutral measure or program is one that is, or can be, used to assist all small businesses. UDOT must meet the maximum feasible portion of its overall DBE goal by using race -neutral means of facilitating DBE participation.

Bidders who solicit non-DBE subcontract quotes will utilize equal opportunity action to allow DBEs to compete for and perform on subcontracts. If the Bidder has selected 'Intend to Sublet' on the 'Bid Submission Checklist and Forms' window in the EBS software, Part B of the DBE Bid Assurance will indicate that the Bidder intends to sublet a portion of the contract work.

The results of the equal opportunity actions will be included with the EBS prepared Bid Proposal as a *Race Neutral Documentation*. Part B of the Bid Assurance Form will indicate the existence of any of the following types of Race Neutral Documentation that the Bidder has entered into EBS:

- (a) DBE Commitment
- (b) DBE Contact Log
- (c) Quote Comparison

In either event, the Contractor shall continue efforts to consider and utilize DBE firms during the performance of the contract.

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### 2. DBE Commitment

For a bid to be considered responsive, Bidders shall submit the following information regarding DBE compliance with the EBS prepared Bid Proposal:

Submit a DBE Commitment of work that will be subcontracted to certified DBE firm(s) as listed in the UUCP's Directory or DBE firms that have been approved by the UUCP prior to bid opening.

- a. The names of DBE firms that will participate in the contract;
- b. A specific description of the work each named DBE firm will perform (list specific bid items). Listed bid items shall be considered to be committed in their entirety unless Bidders designate otherwise in their DBE Commitment.
  - (1.) If mobilization is a bid item that is partially committed to a DBE, indicate the dollar amount of the DBE mobilization.
  - (2.) If a partial quantity is committed to a DBE, indicate the quantity committed to the DBE.
  - (3.) If a partial performance of an item is committed to a DBE, explain what part of the item the DBE will perform;
- c. The dollar amount of participation by each named DBE firm;
- d. If the contract goal is not met, evidence of good faith efforts.

The DBE Commitment is to be included in the bid prepared within, and said information will be kept confidential and will not be reviewed unless the Contractor is otherwise determined to be the low Bidder or the DEPARTMENT elects to review said information in making its determination as to award of the contract.

### 3. Race Neutral Commitment

For a bid to be considered responsive, Bidders shall submit the following information regarding equal opportunity compliance with their EBS prepared Bid Proposal:

Submit a Race Neutral DBE Commitment of work that will be subcontracted to certified DBE firm(s) as listed in UUCP DBE\_Directory or DBE firms that have been approved by the DEPARTMENT prior to bid opening. The DBE Commitment will include:

- a. The bid item(s) or work classification(s) that will be subcontracted;



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- b. The DBE firms that have been contacted. A reasonable number of DBEs available to perform the anticipated subcontract work must be contacted. The DBE firms must be given a reasonable amount of time to develop subcontract quotes.
- c. The results of the contacts with the DBE firms
- d. Name(s) of anticipated DBE subcontractor(s)
- e. Anticipated work items to be performed by DBE(s)
- f. Anticipated dollar amount of subcontract(s).

A specific description of the work each named DBE firm will perform (list specific bid items). Listed bid items shall be considered to be committed in their entirety unless Contractors designate otherwise in their DBE commitment.

- (1.) If mobilization is a bid item that is partially committed to a DBE, indicate the dollar amount of the DBE mobilization.
- (2.) If a partial quantity is committed to a DBE, indicate the quantity committed to the DBE.
- (3.) If a partial performance of an item is committed to a DBE, explain what part of the item the DBE will perform;

NOTE: In the EBS (Electronic Bidding System):

Use the quote comparison to document item (a)

Use the contact log to document items (b) and (c).

Use the DBE commitment to document items (d), (e), and (f).

The *Race Neutral Documentation* submitted in the EBS prepared bid, will be kept confidential and not reviewed unless the Contractor is otherwise determined to be the low Bidder or the DEPARTMENT elects to review said information in making their determination as to award of the contract.

#### 4. DBE Written Confirmation

Low Bidder shall submit to the Director of Construction & Materials within three (3) work days after the bid opening written confirmation from each DBE that it is participating in the contract as provided in the Prime Contractor's DBE Commitment or Race Neutral Documentation. The written confirmation shall include the following information:

- a. A description of the work that will be performed (list specific bid items). Listed bid items shall be considered to be committed in their entirety unless Contractors designate otherwise in their DBE commitment.

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- (1) If mobilization is a bid item that is partially committed, please confirm the dollar amount of the mobilization to be performed.
- (2) If a partial quantity is committed, confirm the quantity to be performed.
- (3) If a partial performance of an item is committed, confirm what part of the item will be performed.
- (4) Unit bid prices for each bid item that is committed to a DBE.
- (5) Total dollar amounts (mathematical extensions) for each bid item that is committed to a DBE

b. The dollar amount of participation by each named DBE firm.

### 5. Good Faith Efforts

Bidders who fail to meet the DBE goal for bid evaluation must demonstrate with documentary evidence that they made good faith efforts to do so. Bidders are required to include the Good Faith Efforts Documentation with the EBS prepared Bid Proposal. The said information will be kept confidential and not reviewed unless the Bidder is otherwise determined to be the low Bidder or UDOT and authorized representatives elect to review said information in making their determination as to award of the contract. For the bid to be considered responsive, Bidders shall include with the BID PROPOSAL specific documentary evidence that good faith efforts have been made to meet the goal.

Attached hereto and marked Exhibit A, and by this reference made a part hereof, is a list of actions that may be used to prove the kinds of efforts prospective Bidders should consider in their attempts to demonstrate good faith efforts. The list of actions, as contained in Exhibit A, is not intended to be an exclusive list of efforts that a prospective Bidder may wish to consider in demonstrating good faith efforts to satisfy DBE participation requirements. The determination of good faith efforts shall be based upon the information and documentation of the actions supplied by the Bidder with the bid proposal. The DEPARTMENT reserves the right to investigate and verify such information or to request the low dollar Bidder to clarify information submitted at the time of bid.

### 6. Award of the Contract

The award of the contract, if awarded, will be made to the apparent successful responsive, responsible Bidder who submitted a reasonable bid for the contract and has complied with this Subsection D.

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### 7. Administrative Reconsideration

Good faith efforts as used herein shall be determined on a case by case basis. If it is determined that the apparent low Bidder has failed to meet the requirements of Exhibit A, the bidder will be provided an opportunity for administrative reconsideration.

- a. Official(s) who did not take part in the original determination will perform the administrative reconsideration..
- b. The Bidder will have the opportunity to provide to written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so.
- c. The Bidder will have the opportunity to meet in person with the reconsideration official to discuss the issue of whether it met the goal or made adequate good faith efforts to do so.
- d. The Bidder will be notified in writing of the decision and the basis for the decision.
- e. The reconsideration decision is administratively final and is not appealable to FHWA nor to the DOT.

### E. COUNTING DBE PARTICIPATION TOWARD GOALS FOR BID EVALUATION

1. The DEPARTMENT will recognize and grant DBE credit toward the goal for bid evaluation (*race conscious* goals) for work committed to DBE subcontractors ONLY in the types of work for which DBE certification has been granted by the UUCP prior to bid opening. It is necessary that all bidders refer to the UUCP DBE Directory for direction and guidance. A current copy of the DBE directory is available through the Civil Rights Office and on the Internet at (click on this link):

<http://www.udot.utah.gov/index.php?m=c&tid=198>

An electronic file of the DBE Directory is available for downloading to use in the Electronic Bidding system (EBS) at the following URL (click on this link):

<http://www.udot.utah.gov/index.php/m=c/tid=317>

2. The DEPARTMENT will grant DBE credit toward *race neutral* goals for work performed by firms who are not DBE certified prior to bid opening or who bid types of work for which DBE certification has not been granted by the DEPARTMENT prior to bid opening but subsequently are granted DBE certification.

3. Commitments to DBEs that exceed the Goal for Bid Evaluation will be considered as both race conscious and race neutral. The dollar amount of the Goal for Bid Evaluation will be considered to be race conscious participation. Any dollar amounts in excess of the Goal for Bid Evaluation will be considered as race neutral participation.

F. COUNTING DBE PARTICIPATION TOWARD GOALS FOR PERFORMANCE

Subcontracts to DBEs that exceed the *Goal For Bid Evaluation* will be considered in part as race conscious participation and in part as race neutral participation. Any dollar amounts in excess of the *Goal For Bid Evaluation* will be considered as race neutral participation.

It is intended that the Contractor shall utilize the subcontractors designated in the DBE Commitment in the performance of the contract. Any changes in the Contractor's DBE Commitment, such as substitution of a DBE subcontractor, substitution of contract items, or decrease in total dollar amount must be approved by the DEPARTMENT and must be covered by a Change Order. Unauthorized substitutions or eliminations may result in the imposition of sanctions. Failure to meet the Goal for Performance, that is established at the time of award by the Contractor's DBE Commitment, without adequate justification, including concurrence of the ENGINEER and Civil Rights Manager, shall result in the imposition of sanctions as provided in Part I of this Special Provision.

1. Only the value of the work actually performed by the DBE will count toward DBE goals.
2. Contractors may count toward their contract goals a portion of the total dollar value of a contract with a joint venture eligible under the standards of this bid condition equal to the percentage of the ownership and controls of the DBE partner in the joint venture.
3. The ENGINEER will recognize and grant DBE credit for work subcontracted and performed by DBE subcontractors ONLY in the types of work for which DBE certification has been granted by the UUCP prior to bid opening. It is necessary that all Bidders refer to the UUCP DBE Directory for direction and guidance. A current copy of the UUCP DBE directory is available through the Civil Rights Office and on the Internet at (click on this link):

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An electronic file of the DBE Directory is available for downloading to use in the Electronic Bidding system (EBS) at the following URL (click on this link):

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4. Contractors may count toward their goals only the value of the work actually performed by the DBE toward the DBE goals.
  - a. Work performed by the DBE's own forces using "regular employees" and "regular equipment."
  - b. The cost of supplies and materials obtained and purchased by the DBE and equipment leased for the work of the contract.
  - c. Work that a DBE subcontracts to a lower tier DBE firm.
5. Contractors may not count toward the DBE goals:
  - a. Supplies and material purchased and equipment leased by the DBE from the prime Contractor or its affiliates or another subcontractor on the project.
  - b. Work that a DBE subcontracts to a lower tier non-DBE firm.
6. Contractors may count toward their goals only expenditures to a DBE that performs a commercially useful function in the work of the contract.
  - a. A DBE performs a "commercially useful function" when it is responsible for the execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.
  - b. The DEPARTMENT shall evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.
  - c. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the DEPARTMENT must examine similar transactions, particularly those in which DBEs do not participate.

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- d. A DBE does not perform a commercially useful function if it does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved.
7. The DEPARTMENT shall use the following factors in determining whether a DBE trucking company is performing a commercially useful function:
- a. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
  - b. The DBE must be responsible for the management and supervision of the entire trucking arrangement for the purpose of meeting DBE goals.
  - c. The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
  - d. The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
  - e. The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement.

**Example:** Leases two trucks from DBE Firm Y and six trucks from non-DBE Firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. With respect to the other two trucks provided by Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks Firm X receives as a result of the lease with Firm Z.

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- f. For purposes of this paragraph (d), a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.
- 8. Contractors may count expenditures with DBEs for materials or supplies as provided in the following:

- a. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies counts toward DBE goals.

For purposes of this paragraph, a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

- b. If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies counts toward DBE goals.

For purposes of this paragraph, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

- (1) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
- (2) A firm may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating or maintaining a place of business if the firm both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an *ad hoc* or contract-by-contract basis.
- (3) Packagers, brokers, manufacturers representatives, or other persons or firms who arrange, or expedite, transactions are not regular dealers.

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- (4) A DBE trucking company that picks up a product from a manufacturer or regular dealer and delivers the product to the Contractor performs a delivery service. Credit will not be given based on a percentage of the cost of the product; credit will be allowed only for the cost of the transportation service.
- 9. If the materials or supplies are purchased from a service provider, the fees or commission charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies, count toward the DBE goals.

A Service Provider is a business that is neither a manufacturer nor a regular dealer but simply transfers title of a product from manufacturer to ultimate purchaser or a firm that puts a product into a container for delivery. A service provider charges a fee or a commission for assistance in the procurement of the materials and supplies, or fees or transportation for the delivery of materials or supplies required on a job site.

  - a. Only the fees, commissions, or transportation performed by the DBE service provider count toward the DBE goals. The DEPARTMENT must determine that the fees are reasonable and not excessive as compared with fees customarily allowed for similar services.
  - b. No portion of the cost of the materials and supplies count toward the DBE goals. Documentary evidence of the supply agreements, i.e., sales contract, purchase order, etc., shall be submitted to the Resident Engineer or Consultant Engineer at the Preconstruction Conference. The agreement shall set forth the estimated quantities, unit prices, total dollar amounts, material guarantees, delivery, and payment requirements including the requirements listed part E, 4, e, of this DBE Special Provision.
- 10. Prompt payment for the work accomplished is an integral part of the concept of commercially useful function.

See Section F, Subsection 6,a for a definition of “commercially useful function.”
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### G. CONTRACTOR’S RESPONSIBILITY

- 1. It is the Contractor’s responsibility to determine the level of professional competence and financial responsibility of any proposed DBE subcontractor. The Contractor shall ascertain that the proposed DBE subcontractor is particularly experienced and equipped for the work of the subcontract.
- 2. It is the Contractor’s responsibilities to monitor and assure that DBE’s listed to fulfill DBE goals perform a commercially useful function.



H. DBE SUBCONTRACTOR'S FAILURE TO PERFORM SUCCESSFULLY

If, during the performance of the contract, the Prime Contractor determines that a DBE subcontractor is unable to perform successfully, the Contractor shall make good faith efforts to replace the DBE subcontractor with another DBE to fulfill the Goal for Bid Evaluation. For Race Conscious DBE participation, the Contractor shall consider the uncompleted DBE committed work items as well as other work items as a part of the good faith efforts. All substitutions of DBE subcontractors shall receive prior approval by the DEPARTMENT.

The Contractor shall not substitute DBE subcontractor(s), work item(s), nor decrease dollar amount(s) as indicated in the Contractor's DBE Commitment without prior submission of written justification to the ENGINEER and without prior approval of the ENGINEER and the Civil Rights Manager.

The Contractor shall not substitute DBE subcontractor(s), work item(s), nor decrease dollar amount(s) as indicated in the Contractor's DBE Commitment Substitutions without prior submission of a written statement from the DBE consenting to the substitution or decrease and holding the ENGINEER harmless for approving the substitution.

Unauthorized substitutions of the DBE(s), underruns of work item(s), or decreases in dollar amount(s) may result in the imposition of sanctions as allowed under Section I.

UDOT reserves the right to authorize completion of the work that was subcontracted to a DBE who is unable to perform successfully by either of the following methods:

1. Approve, at no additional cost to the DEPARTMENT, a replacement DBE subcontractor and, when appropriate, modify the contract to provide for reasonable extra time necessary to obtain a DBE replacement at no additional cost to the DEPARTMENT.
2. Direct the Contractor to perform at unit bid prices. In the event this option is selected, the percentage DBE goal will be adjusted as may be appropriate.

I. SANCTIONS

1. The Contractor's DBE Commitment becomes a 3-part commitment comprised of the DBE Contractor(s), work item(s) and dollar amount(s). The Commitment becomes a contract specification upon award of the contract and becomes the minimum goal for contract performance.

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If the Contractor fails to achieve the minimum goal, established in the contract at the time of the award of the contract or later modified, the contract payments shall be reduced as a liquidated damage and not as a penalty by an amount equal to the dollar amount of work not performed by the DBE. The dollar amount of any sanction will be computed using the unit prices indicated in the DBE subcontract

Exceptions:

- a. Any authorized adjustment in the DBE Commitment that has been approved by the ENGINEER and Civil Rights Manager.
  - b. Race neutral participation.
2. The ENGINEER shall deduct maximum points for *Compliance with EEO* when completing the *Contract Performance Report*.

### J. RECORD KEEPING

1. The DEPARTMENT must create and maintain a Bidders list consisting of all firms bidding on prime contracts and bidding or quoting subcontractors on DOT-assisted projects. For every firm, the following information must be submitted annually:
  - a. Firm name
  - b. Firm address
  - c. Firm's status as a DBE or non-DBE
  - d. Age of firm
  - e. Annual gross receipts of the firm.

Every firm bidding or quoting as a prime or subcontractor at any level on DOT-assisted projects must register annually with UDOT.

NOTE: Items (a) and (b) should be completed in the EBS software by using the 'Quote Comparison' and submitted with your bid.

2. With the bid or no later than 10 work days after bid opening date, each and every prime bidder must submit to The DEPARTMENT a list of all firms bidding and/or quoting as subcontractors, service providers or suppliers.\* The Prime Bidder must also submit for each and every firm sub-quoting the following information:
  - a. Firm Name

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- b. Firm address
- c. Work classification(s) bid by subcontractor, service provider or supplier:
  - (1) Building
  - (2) Concrete: Curb & gutter, Flatwork, Inlet Boxes, etc.
  - (3) Concrete: Structural
  - (4) Consulting firms
  - (5) Demolition
  - (6) Electrical: Hwy lighting, signals & fiber optics
  - (7) Equipment rentals and sales
  - (8) Excavation
  - (9) Fencing
  - (10) Grading
  - (11) Guardrail
  - (12) Landscaping & erosion control
  - (13) Miscellaneous
  - (14) Painting: Highway structures
  - (15) Painting: Highway striping & painted messages
  - (16) Paving: Asphalt highway & runway, etc.
  - (17) Paving: Concrete
  - (18) Paving: Miscellaneous
  - (19) Pipe Culverts, drainage, sewer & water
  - (20) Reconstruction : Manholes, etc.
  - (21) Rotomilling
  - (22) Sawing & sealing
  - (23) Signs permanent
  - (24) Steel reinforcing
  - (25) Steel structural
  - (26) Surveying
  - (27) Traffic Control: Flagging
  - (28) Traffic Control: Temp. Signs and Devices
  - (29) Trucking
  - (30) Supplier: Manufacturer
  - (31) Supplier: Regular Dealer
  - (32) Supplier: Service Provider

\*NOTE: This requirement can be met with the 'Quote Comparison' function in EBS. The report must be printed and faxed to the Civil Rights Department at (801) 965-4101.

## **Exhibit A**

### **Suggested Actions and Required Documentation to Demonstrate Good Faith Efforts to Comply With DBE Requirements**

A Bidder must show that it took necessary and reasonable steps to achieve a DBE goal that, by their scope, intensity, and appropriateness, can reasonably be expected to fulfill the program requirement. The efforts employed should be those that would be taken if a Bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract. Goal. Mere *pro forma* efforts are not good faith efforts to meet the DBE contract requirements.

Documentary evidence of each action taken must be submitted with the Bid Proposal.
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The following is taken, with some modification, from CFR 49 Part 26, Appendix A. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive.

## **GUIDANCE CONCERNING GOOD FAITH EFFORTS**

- I. When the DEPARTMENT establishes a contract goal on a Federal aid contract, a Bidder must, in order to be responsive, make good faith efforts to meet the goal. The Bidder can meet this requirement in either of two ways:
  - A. The Bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose.
  - B. If it doesn't meet the goal, the Bidder can document adequate good faith efforts. This means that the Bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part that, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which the DEPARTMENT has established a contract goal, CFR 49, Part 26 requires UDOT to use the good faith efforts mechanism of this part. It is up to the DEPARTMENT to make a fair and reasonable judgment whether a Bidder that did not meet the goal made adequate good faith efforts. It is important for the DEPARTMENT to consider the quality, quantity, and intensity of the different kinds of efforts that the Bidder has made. The efforts employed by the Bidder should be those that one could reasonably expect a Bidder to take if the Bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. The DEPARTMENT emphasizes, however, that its determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.
- III. The U. S. Department of Transportation also strongly cautions the DEPARTMENT against requiring that a Bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the Bidder makes an adequate good faith efforts showing. This rule specifically prohibits UDOT from ignoring bona fide good faith efforts.
- IV. The following is a list of types of actions that UDOT should consider as part of the Bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
  - A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The Bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The Bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

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- B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
- C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- D. Negotiating in good faith with interested DBEs.
  - (1) It is the Bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
  - (2) A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.
    - (a) The fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable.
    - (b) No specific price differential has been established by 49 CFR 26. This approach allows flexibility.
    - (c) Along with the reasonableness of the cost necessarily comes the fact that prime Contractors are not expected to bear unreasonable costs.
    - (d) Any burden that a non-DBE subcontractor might face is also limited by the reasonableness of competing bids.

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- (3) The ability or desire of a prime Contractor to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make good faith efforts. Prime Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
  - (4) The ability or desire of a prime Contractor to bundle the work of a subcontractor who wishes to perform all the work of the subcontract with its own organization does not relieve the Bidder of the responsibility to require a subcontractor to make good faith efforts. Subcontractors are not required to accept higher quotes from lower tier DBEs if the price difference is excessive or unreasonable.
- E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the project goal.
- F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
- G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- H. Effectively using the services of available minority/women community organizations; minority/women Contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

NOTE: The DBE 'Contact Log' in EBS, submitted as part of the Bid Proposal, can be used to document the following efforts:

- IV. A.
- IV. C.
- IV. D. (1)

The 'Quote Comparison' in EBS, submitted as part of the Bid Proposal, can be used to document the following efforts:

- IV. B.
- IV. D. (3)

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- V. In determining whether a Bidder has made good faith efforts, the DEPARTMENT may take into account the performance of other Bidders in meeting the contract. For example, when the apparent successful Bidder fails to meet the contract goal, but others meet it, UDOT may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful Bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other Bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful Bidder having made good faith efforts.

Submit with the Bid Proposal documentary evidence to prove that good faith efforts were accomplished:

1. Submit copies of all solicitations: correspondence, faxes, advertisements, telephone logs with dates, times, names of persons contacted, nature of conversation, DBEs' responses, and etc.
2. If DBEs submitted quotes that were not used because the range of additional costs was determined to be excessive or unreasonable, submit the range that has been determined by the Bidder to be a reasonable range of additional costs and explain how that range was determined.
3. As a part of demonstrating a reasonable range of additional costs, submit copies of all subcontractor quotes, copies of spread sheet(s) which compare all DBE quotes with non-DBE quotes and which include bid item(s) quoted, work classifications, quantities, prices, and dollar amounts.
4. Submit a narrative of specific names and types of information, assistance, considerations given, and efforts to assist DBEs under Item IV, subparts C through F.



**DBE BID ASSURANCE  
COMPLETE ONLY PART A. OR PART B.**

**PART A. RACE CONSCIOUS DBE PARTICIPATION  
SPECIFIC ASSIGNED *CONTRACT DBE GOAL* FOR BID  
EVALUATION \_\_\_\_\_ PERCENT**

If the DBE goal which is indicated in Section A, *CONTRACT GOAL*, of APPENDIX A, *BID CONDITIONS*, *DISADVANTAGED BUSINESS ENTERPRISE (DBE)* is greater than 0.0 percent, complete only Part A, and submit *DBE Commitment*, and if applicable, *Documentation of Good Faith Efforts*.

By signing the BID REPORT (either manually or electronically), it is understood that those individuals who sign as owners or authorized representatives of the Bidder, have read and are familiar with APPENDIX A, *SPECIAL PROVISION*, *BID CONDITIONS*, *DISADVANTAGED BUSINESS ENTERPRISE* and hereby certify that good faith efforts have been utilized to meet or exceed the goal of the DBE Program as established by the DBE Special Provision.

Indicate intended DBE commitment.

\_\_\_\_\_ We intend to meet or exceed the contract goals as per the DBE Commitment which is submitted with the Bid Proposal.

RACE CONSCIOUS AND RACE NEUTRAL COMMITMENT \_\_\_\_\_ PERCENT

\_\_\_\_\_ We fail to meet the advertised goal. This firm commits to DBE participation as per the DBE Commitment that is submitted with the EBS Bid Proposal and to continue Good Faith Efforts throughout the performance of the project. Documentation of Good Faith Efforts is submitted with the Bid Proposal, including:

1. DBE Contact Log Report
2. Quote Comparison Report

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**PART B. RACE NEUTRAL DBE PARTICIPATION  
ASSIGNED *CONTRACT DBE GOAL* FOR BID EVALUATION  
\_\_\_\_\_ PERCENT**

If the DBE goal, which is indicated in Section A, *CONTRACT GOAL*, of APPENDIX A, *BID CONDITIONS*, *DISADVANTAGED BUSINESS ENTERPRISE (DBE)* is 0.0 percent, complete only Part B and submit *Race Neutral DBE Information*.

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By signing the BID REPORT (either manually or electronically), it is understood that those individuals who sign as owners or authorized representatives of the Bidder, have read and are familiar with APPENDIX A, SPECIAL PROVISION, BID CONDITIONS, DISADVANTAGED BUSINESS ENTERPRISE and hereby certify that equal opportunity action has been utilized to allow DBEs to compete for and perform on subcontracts.

\_\_\_\_\_ We do not intend to sublet a portion of the contract work.

\_\_\_\_\_ We intend to sublet a portion of the contract work. Our firm has taken equal opportunity action to allow DBEs to compete for and perform on subcontracts. Documentation of Race Neutral efforts is submitted with the Bid Proposal, including:

- \_\_\_\_\_ 1. RACE NEUTRAL DBE COMMITMENT \_\_\_\_\_ PERCENT
- \_\_\_\_\_ 2. DBE Contact Log Report
- \_\_\_\_\_ 3. Quote Comparison Report

**IX. Attention Contractors**

**E.E.O. Affirmative Action Requirements on  
Federal and Federal-Aid Construction Contracts of \$10,000 or More**

Include the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity, Executive Order (EO) 11246, as amended (incorporated by reference & Appendix A - below) and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth in §60-4.3 (incorporated by reference) in all requests for bids/solicitations on all contracts and subcontracts of \$10,000 or more

Include in Appendix A, Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity, the goals established by the Office of Federal Contract Compliance Programs (OFCCP) for minority and female participation in each craft on all contracts and subcontracts.

**APPENDIX A (EO 11246)**

The OFCCP goals for minority representation in each trade are shown below. The goal for female utilization (6.9 percent) applies to all contracts and subcontracts irrespective of their geographical location.

COUNTY	GOAL	COUNTY	GOAL	COUNTY	GOAL
Beaver	12.6	Box Elder	5.1	Cache	5.1
Carbon	5.1	Daggett	5.1	Davis	6.0
Duchesne	5.1	Emery	5.1	Garfield	12.6
Grand	10.2	Iron	12.6	Juab	5.1
Kane	12.6	Millard	5.1	Morgan	5.1
Piute	5.1	Rich	5.1	Salt Lake	6.0
San Juan	10.2	Sanpete	5.1	Sevier	5.1
Summit	5.1	Tooele	6.0	Uintah	5.1
Utah	2.4	Wasatch	5.1	Washington	12.6
Wayne	5.1	Weber	6.0		

These goals are applicable to all contractors' or subcontractors' construction work (whether or not it is Federal or Federally assisted) performed in the covered area.

The Bidder's attention is called to the "Equal Opportunity Clause" (form FHWA 1273- II 1 b, included in this contract) and the "Standard Federal Equal Employment Specifications" set forth in 41 CFR Part 60-4 (incorporated by reference).

Compliance with the Executive Order and the regulations in 41 CFR part 60-4 is based on the implementation of the "Equal Opportunity Clause," specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and the efforts to meet the goals.

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Provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification lists the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract will be performed.

Under Section 303 of EO 11246, only the U. S. Department of Labor (DOL) has the authority to determine compliance with EO 11246 and its implementing regulations. The Federal Highway Administration (FHWA) and the State highway agency (UDOT) do not have independent authority to determine compliance with EO 11246, 41 CFR Chapter 60, or the minority and female participation goals established by the Office of Federal Contract Compliance Programs (OFCCP), pursuant to 41 CFR Chapter 60.

If the State highway agency (UDOT) or the FHWA becomes aware of any possible violations of EO 11246 or 41 CFR Chapter 60, each has the authority and the responsibility to notify the OFCCP.

### **APPENDIX B**

As used in these specifications:

- a. Covered area: The geographical area described in the solicitation from which this contract resulted;
- b. Director: Director, Office of Federal Contract Compliance Programs, United State Department of Labor, or any person to whom the Director delegates authority;
- c. Employer identification number: The Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d. Minority includes:
  - (i) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
  - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
  - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
  - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

## **X. Specific Equal Employment Opportunity Responsibilities**

### **1. General**

- a. The State Transportation Agency (STA) and Federal Highway Administration (FHWA) have the authority and the responsibility to ensure compliance with 23 USC Section 140 and Title VI of the Civil Rights Act of 1964, as amended, and related regulations, including 49 CFR Parts 21 and 23, and 23 CFR Parts 200, 230, and 633. Pursuant to this authority, the STA and the FHWA will conduct compliance reviews of contractors on federally funded highway projects to determine compliance with these laws and related regulations. The STA will prepare complete, written reports of findings of the compliance reviews. The FHWA will analyze the reports, and the evidence on which they are based.
- b. A contractor's EO requirements are in the contract provisions referenced in the FHWA-1273 (included herein). These include contractor acceptance of Section II, 1 c, and the obligation of the contractor to comply with specific EO activities at a minimum.
- c. Submit form PR-1391 in July and at other times when such information is required by the STA or the FHWA; and submit other documentation and reports as requested by the STA or the FHWA.

### **2. Equal Employment Opportunity (EEO)**

- a. Where minorities and women have been excluded from certain classifications in a contractor's work force, the EEO affirmative action requirements specified in the contract will be implemented in good faith to provide EEO.
- b. The contractor will use the avenue afforded by the Training Special Provision (included herein) to increase minority and female employment in crafts where they have been underrepresented.

### **3. Minority and Female Average Availability Percentages – Utah**

- a. Average percentages for minority (M) and female (F) availability in each trade, by County, are shown below. Availability is defined as "an estimate of the number of qualified minorities or women available for employment in a given job group."

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COUNTY	M	F	COUNTY	M	F	COUNTY	M	F	COUNTY	M	F
Beaver	6.8	3.0	Box Elder	9.9	5.0	Cache	9.9	5.0	Carbon	12.3	3.0
Daggett	12.3	3.0	Davis	8.9	3.0	Duchesne	12.3	3.0	Emery	15.5	5.0
Garfield	15.5	5.0	Grand	15.5	5.0	Iron	6.8	3.0	Juab	8.2	4.0
Kane	15.5	5.0	Millard	6.8	3.0	Morgan	11.1	3.0	Piute	15.5	5.0
Rich	9.9	5.0	Salt Lake	21.6	5.0	San Juan	15.5	5.0	Sanpete	8.2	4.0
Sevier	15.5	5.0	Summit	11.1	3.0	Tooele	8.2	4.0	Uintah	12.3	3.0
Utah	11.9	4.0	Wasatch	11.1	3.0	Washington	10.0	4.0	Wayne	15.5	5.0
Weber	17.8	5.0									

- b. The use of these average percentages in no way precludes the contractor from performing and documenting good faith efforts to recruit and employ minorities and females.

### 4. Compliance Determinations

- a. The list below is a set of “Good-Faith Efforts” criterion established in FHWA’s regulatory and policy requirements that may be used to determine a contractor’s good faith efforts:
  1. Contractor’s EEO Policy
  2. Dissemination of the EEO Policy
  3. Authority and Responsibility of EEO Officer
  4. Periodic EEO meetings (EEO indoctrination)
  5. Notices/posters on bulletin board
  6. Advertising as an “EEO Employer”
  7. Recruitment – Systematic and direct recruitment efforts with sources likely to yield minorities and women
  8. Educate all new supervisors within 30 days of reporting to duty
  9. Encourage present employees to refer minorities and women
  10. Evaluates the spread of wages to determine whether discrimination exists
  11. Investigates all complaints, promptly, and appropriate corrective action is taken
  12. Assist in locating, qualifying, and increasing the skills of minorities and women
  13. Fully uses training programs and advises employees and applicants of opportunities
  14. Minorities and women exist in contractor’s training program
  15. Ensure nonsegregated facilities
  16. Minorities and women are employed in all occupations, crafts, and job classifications on an equal basis
  17. Procedures establishing the monitoring of subcontractors’ compliance with nondiscrimination, EO and EEO obligations
  18. The need for adequate records and reports

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19. Minorities and women reach accumulating work hours expected based on their representation
- b. Affirmative Action is determined based on the evaluation of the contractor's compliance with all of the above good faith efforts and on the contractor's efforts to achieve maximum results from the actions.
- c. A contractor is in compliance when there is no evidence of discrimination in employment, training, DBE, Indian Preference provisions, equal opportunity requirements, or evidence every good faith effort has been made.

### 5. Training Special Provisions

This Training Special Provisions supersedes subparagraph II 6b of the FHWA-1273, and is an implementation of 23 U.S.C.140 (a).

Provide training as follows as part of the equal employment opportunity affirmative action program:

Provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under the special provision is 0 (amount to be filled in by the State Highway Department (STA)).

If a portion of the contract work is subcontracted, determine how many, if any, of the trainees are to be trained by the Subcontractor. Make this training special provision applicable to the subcontract. Retain the primary responsibility for meeting the training requirements imposed by this special provision. Where feasible, 25 percent of apprentices or trainees in each occupation will be in their first year of apprenticeship or training.

Distribute the number of trainees among the work classifications on the basis of needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, submit to the State highway agency for approval the number of trainees to be trained in each selected classification and training program to be used. Specify the starting time for training in each of the classifications. The STA gives credit for each trainee employed on the contract work who is currently enrolled or becomes enrolled in an approved program. Reimbursement is made for the trainees as provided below.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. Demonstrate the steps taken to achieve compliance with

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this Training Special Provision. This training commitment is not intended nor used to discriminate against any applicant for training, whether a member of a minority group or not.

Do not employ a trainee in any classification in which they have successfully completed a training course leading to journeyman status or in which they have been employed as a journeyman. Include appropriate questions in the employee application or by other suitable means to satisfy this requirement. Document the findings in each case.

The training program selected, and approved by the STA and the FHWA, establishes the minimum length and type of training for each classification in that program. The STA and the FHWA approves a program if it meets the equal employment opportunity obligations and qualification of the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and training are considered acceptable if administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program is obtained from the State prior to commencing work on the classification covered by the program. Provide training in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification if approved by the division office. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, reimbursement is made of 80 cents per hour for training given an employee, on this contract, in accordance with an approved training program. This reimbursement is made even though additional training program funds are received from other sources provided such other source does not specifically prohibit other reimbursements. Reimbursement for off-site training indicated above may only be made where the trainees are concurrently employed on a Federal-aid project and one or more of the following is done: contributes to the cost of the training, provides the instruction to the trainee, or pays the trainee's wages during the off-site training period.

No payment of the 80 cents per hour is made if either the failure to provide the required training or the failure to hire the trainee as a journeyman occurs and evidences a lack of good faith effort in meeting the requirements of this Training Special Provision. A trainee begins training on the project as soon as feasible after start of work. The trainee remains on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. Responsibilities under this Training Special



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Provision are fulfilled if acceptable training to the number of trainees specified is provided.

Trainees are paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

Furnish the trainee a copy of the program to be followed in providing the training. Provide each trainee with a certification showing the type and length of training satisfactorily completed.

Provide for the maintenance of records and furnish periodic reports documenting their performance under this Training Special Provision. UDOT form C-138, Monthly Training Report satisfies this reporting requirement.

## XI. Required Contract Provisions FEDERAL-AID CONSTRUCTION CONTRACTS

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XII.	Certification Regarding Use of Contract Funds for Lobbying

### ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

#### I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

#### II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

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3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

### 6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

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b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

**8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

**9. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

### III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

### IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

#### 1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual

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relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

### 2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

### 3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

### 4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

#### a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality

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other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

### b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

### c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

## 5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

## 6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## 7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

## 8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the

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standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

### **9. Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

## **V. STATEMENTS AND PAYROLLS**

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

### **1. Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

### **2. Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

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## VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

## VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

## VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

## IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

## NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

*"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans,*



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*maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or*

*Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or*

*Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented; Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."*

### **X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

### **XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

#### **1. Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

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j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

\* \* \* \* \*

### **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions**

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

\* \* \* \* \*

### **2. Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

\* \* \* \* \*

### **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

\* \* \* \* \*

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### **XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

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**XII. Wage Rates Non-Applicable**

**XIII. Special Provisions and Supplemental Specifications**

June 29, 2005

**SPECIAL PROVISION**

**BRF-0137(5)2**

**SECTION 00555 M**

**PROSECUTION AND PROGRESS**

Add the following to paragraph A, article 1.9, Limitation of Operations:

- A. Provide the Region Four Public Involvement Coordinator, (Myron Lee) with two weeks notice of beginning and ending construction.  
Phone: (435)893-4702  
Fax: (435)896-6458
- B. Contact Sanpete County and Sanpete School District offices regarding road closure to/from Mayfield 2 weeks prior to closure.
- C. Max flow for the Old Field Canal is 30 cfs. Irrigation season begins April 1<sup>st</sup> and ends October 1<sup>st</sup>. Contact Alan Dyring (see utility owners on sheet RD-1) from the irrigation company if questions arise.
- D. Maintain 6 cfs of stock water at all times and any irrigation water requirements.
- E. Time charges commence the first day of road closure or February 15<sup>th</sup> 2006, whichever occurs first.

March 29, 2005

**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 00725M**

**SCOPE OF WORK**

**Add the following to article 1.18 Paragraph C:**

1. The Department does not accept VE proposals related to pavement section structure, strength or performance.

**Delete article 1.18 Paragraph D and replace with the following:**

- D. The Department rejects proposals that provide equivalent options to those already in the contract.

**Continued on next page.**

**Delete article 1.18 Paragraphs E – I and replace with the following:**

- E. The Department may reject proposals that:
  - 1. Contain revisions the Department is already considering or has approved for the Contract.
  - 2. Do not generate sufficient savings.
  - 3. Do not provide additional information as requested by the Department including requests for field investigation results and surveys, design computations, and field change sheet for proposed design changes.
- F. If the proposal is rejected, the Contractor has no claim to additional costs or delays, including development costs, loss of anticipated profits, or increased material or labor costs.
- G. The Engineer can reject all unsatisfactory work resulting from an approved proposal.
  - 1. Remove rejected work and reconstruct under the original contract provisions at no additional cost to Department.
  - 2. Reimbursement for modifications to the proposal to adjust field or other conditions is limited to the total amount of the contract bid prices.
  - 3. Rejection or limitation of reimbursement is not basis for any claim against the Department.
- H. The Department does not consider savings generated by contingency items when it is reduced as part of a VECP, unless it can be tied to a reduction in contract time.



**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 00820M**

**LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

**Delete Article 1.16 and replace with the following:**

**1.16 INSURANCE REQUIREMENTS**

- A. Workers' Compensation Insurance
  - 1. Provide Workers' Compensation Insurance to cover full liability. As a minimum, comply with the statutory limits defined by the State of Utah.
- B. General Liability Insurance
  - 1. Provide General Liability insurance with the following minimum limits of liability:
    - a. \$1,000,000 Bodily Injury and Property Damage – Each Accident
    - b. \$2,000,000 General Aggregate
    - c. \$2,000,000 Products and Complete Operations Annual Aggregate
- C. Excess General Liability Insurance
  - 1. Provide Excess Liability Insurance with the following minimum limits:
    - a. \$1,000,000 Each Claim
- D. Automobile Liability Insurance
  - 1. Provide Automobile Liability Insurance for claims arising from the ownership, maintenance, or use of motor vehicles involved in project work with the following minimum limits:
    - a. \$1,000,000 Combined single Limit Bodily Injury and Property Damage per Occurrence
- E. Provide the following for all required liability insurance policies:
  - 1. Where and when applicable, name as insured, only in respect to work to be performed under this Contract, the State of Utah and all institutions, agencies, departments, authorities, and instrumentalities, and while acting within the scope of their duties, all volunteers as well as members of governing bodies, boards, commissions, and advisory committees.
  - 2. Coverage for the above insured is primary and not contributing.

3. Incorporate into the insurance policy this statement: "Insurance coverage is extended to include claims reported up to one year beyond the date of substantial completion of this Contract."
- F. Provide UDOT with certificates of insurance showing coverage as required above at the time the contract is executed and maintain the policy in force during the entire period of the Contract. The certificates will also state that the policies required are endorsed to give UDOT (the Engineer) not less than 30 days prior notice in the event of cancellation or change in coverage.
- G. Regardless of the Contractor insurance requirements required in this section, insolvency, bankruptcy, or failure of any insurance company to pay all claims accrued does not relieve Contractor of any obligations.
- H. Endorse all policies to include waivers of subrogation in favor of UDOT.

**SPECIAL PROVISION**

**BRF-0137(5)2**

**SECTION 01280M**

**MEASUREMENT**

**Delete Article 1.3 and replace with the following:**

**1.3 GENERAL MEASUREMENT OF QUANTITIES**

- A. All work completed under the Contract is measured in U. S. Standard measure.
- B. The methods of measurement and computations for determining quantities of material furnished and of work performed under the Contract are methods generally recognized as conforming to good engineering practice.
- C. The Department measures and determines quantities of material furnished and work performed.
- D. When the plan quantities for a specific portion of the work are designated to be the pay quantities for the Contract:
  - 1. They are the final quantities for which payment for such specific portion of the work will be made, unless the Engineer revises the plan dimensions.
  - 2. If revised dimensions result in an increase or decrease in the quantities of work, Department will revise the final quantities for payment in the amount represented by the authorized changes in the dimensions.
- E. When requesting additional compensation on the basis of adjustment to quantities in the bid proposal for items paid as "plan quantity," provide all computations, plots, and supporting documentation necessary for the Engineer to evaluate and verify adjusted quantities.
  - 1. All work associated with providing computations, plots, and supporting documentation is at no cost to the Department, except:
    - a. When the Engineer revises plan dimensions. Refer to Section 01280.
    - b. When the adjusted quantity differs from the plan quantity by more than 10 percent, work required to provide computations, plots, and supporting documentation will be paid for as extra work.
- F. Measurements for area computations:
  - 1. Longitudinal measurements: made horizontally.

2. Transverse measurements: the neat dimensions shown on the plans.
- G. Computing volumes of excavation: Average end area method, or computer generated Digital Terrain Model (DTM) method, unless the Engineer and Contractor agree in writing to an alternate method.
- H. Measure complete structure or structural unit, signal or lighting system, (“lump sum” work) unit to include all necessary fittings and accessories.
- I. Structures: Neat lines shown on the plans or as altered to fit field conditions.
- J. Standard manufactured items (fence, wire, plates, rolled shapes, pipe conduit, etc.), are identified by gauge, unit, weight, section dimensions, etc.
  1. Identification will be nominal weights or dimensions.
  2. Use industry-manufacturing tolerances, unless more stringently controlled by specifications.
- K. Items measured by the foot, (pipe culverts, guardrail, underdrains, etc.): measure parallel with the base or foundations upon which structures are placed.
- L. The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing: measured in fractions of inches.
- M. Materials specified to be measured by the cubic yard may be weighed and converted to cubic yard for payment purposes, when requested by the Contractor and approved by the Engineer in writing. Engineer determines and Contractor agrees to the factors for conversion from weight measurement to volume before this method of measurement of pay quantities is used.
- N. Rental of equipment: measure hours of actual working time and necessary traveling time of the equipment within the limits of the project.
  1. If the Engineer orders special equipment in connection with force account work, the Department measures travel time and transportation to the project.
  2. If the Engineer orders equipment held on the project on a standby basis, the Department pays the agreed rental rate minus the operating cost.

## **Delete Article 1.10**

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01282M**

**PAYMENT**

**Add the following to Part 1, Article 1.1:**

- D. Section 01284: Prompt Payment

**Delete Article 1.14, paragraph E and replace with the following:**

- E. From the total value of work, the Department deducts and retains five percent until after the entire Contract has been completed in an acceptable manner, with the following exceptions:
- a. Retention for subcontracted work paid upon satisfactory completion and acceptance by the Department. Refer to Section 01284.
  - b. When no less than 95 percent of the work has been completed, and with the consent of the Surety, the Engineer may prepare a semi-final estimate from which the Department retains 1½ percent of the original contract amount. The Department certifies the remainder for payment, less all previous payments.

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01284**

**PROMPT PAYMENT**

**Add Section 01284:**

**PART 1      GENERAL**

**1.1      SECTION INCLUDES**

- A.      This section applies only to Federal-Aid Contracts.
- B.      Requirements applicable to Contractors, subcontractors, service providers, material suppliers, and all tier subcontractors, service providers, and suppliers.

**1.2      PROGRESS PAYMENTS**

- A.      Include in subcontract, service, or purchase agreement language agreeing to pay promptly as required by this specification.
- B.      Pay subcontractors for satisfactory performance of sublet work, no later than 10 working days after receipt of payment by the Department.
  - 1.      Certify that payment has been made to all subcontractors for the work performed and paid for on the most recent Department pay estimate.
  - 2.      Provide documentation showing Department estimate number, bid item, quantities, and dollar amounts paid to subcontractors, including payments for contract bid items that are partially sublet.
- C.      Pay Material Suppliers and Service Suppliers within 30 calendar days after receipt of payment for work that includes materials and or services.
- D.      Submit the following to the Engineer within five working days after paying subcontractor(s), service provider(s), or material supplier(s):
  - 1.      A certified statement in the form of an affidavit on letterhead, including the signature of a legally responsible official, certifying:

- a. That payment of the total dollar amount paid to each entity has been made in accordance with all requirements of the contract and special provisions, and
- b. That the dollar amount paid is the total amount due for work or services performed or materials purchased through the most current pay estimate.

### **1.3 RETAINED MONEY**

- A. Include in subcontract, service, or purchase agreement language agreeing to pay retained money for subcontract, service, or purchase agreement upon satisfactory completion of the work and acceptance by the Department.
- B. For purposes of this Section, a subcontractor's work is considered satisfactorily completed when all work included in the subcontract is complete, in accordance with all requirements of the contract, and documented as required by the recipient. When a recipient has partially accepted a portion of the work, that portion of work performed is considered to be satisfactorily completed.
- C. Require written notification from the subcontractor when all subcontract items are complete.
  - 1. Notify the Engineer in writing within two working days after written notification from the subcontractor.
  - 2. The Engineer schedules and coordinates an inspection for acceptance of the work within three working days.
  - 3. Receive notification from the Department in writing when the work is considered to be satisfactorily complete and accepted. Acceptance of the work includes all requirements of the contract and agreement on pay quantities.
  - 4. Upon acceptance of the work, the Department releases an amount equal to the subcontractor's retainage. Submit to the Engineer a certified statement:
    - a. In the form of an affidavit on letterhead, including the signature of a legally responsible official, and the signature of a legally responsible official for the subcontractor, certifying that the total amount due is the total retention.
- D. Pay retained money owed to the subcontractor for satisfactory completion of the accepted work no later than 30 calendar days after receipt of payment from the Department.

- E. Submit to the Engineer within five workdays after making payment a certified statement:
  - 1. In the form of an affidavit on letterhead, including the signature of a legally responsible official, certifying that the total amount paid is the total amount of retained money paid.
- F. A determination of satisfactory completion and payment of retained money does not relieve any contractual obligation.

#### **1.4 DELAY OF PAYMENT**

- A. Delay payment only for cause, with prior written notice to all parties, to include the Department.
- B. Provide subcontractor 10 working days from date of written notification to correct deficiencies.
  - 1. Release payment upon receipt of documentation demonstrating correction of deficiencies within 10 working days.
- C. Engineer may withhold dollar amount of delayed payment from future estimates.
- D. Include in subcontract, service, and purchase agreements, language providing for the use of appropriate alternative dispute resolution mechanisms to resolve time of payment disputes.
- E. Department may hold disputed funds in escrow until the dispute is resolved.

#### **1.5 LIQUIDATED DAMAGES**

- A. Upon determination by the Department of failure to make prompt payment the Engineer will provide written notification to the Contractor. Resolve the failure and make prompt payment within three working days.
- B. Failure to resolve prompt payment results in the assessment of \$250 per each working day, per violation, commencing from the date of the written notification until proof of payment is received.
- C. Proof of payment is defined as providing confirmation from the subcontractor that payment has been received.



- D. Department considers the failure to make prompt payment an indication of a lack of financial fitness. The following additional measures may be imposed as necessary:
1. Forfeit the privilege of bidding on Department projects until payment covered by this Section is made.
  2. Forfeit the privilege of having a subcontract, supply or purchase agreement approved to perform work or supply materials on Department projects until payment covered by this Section is made.
- E. Department employs other mechanisms, consistent with this Section and applicable state and local law, so payment is fully and promptly made.

#### **1.6 CONTRACTOR INCENTIVE ENTITLEMENT**

- A. Two hundred fifty dollars will be paid to Prime Contractor for each subcontractor provided the following criteria is met:
1. Worked on the project.
  2. All prompt payment statements submitted to the project office within five working days after payment to subcontractors.
  3. Department received no valid complaints regarding prompt payment.
  4. Payment within 30 days after project has reached physical completion.

**PART 2      PRODUCTS      Not used**

**PART 3      EXECUTION      Not used**

END SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 01721M**

**SURVEY**

**Delete Article 1.2, and replace with the following:**

**1.2 RELATED SECTIONS**

- A. Section 01280: Measurement
- B. Section 02765: Pavement Marking Paint

August 25, 2005

**SPECIAL PROVISION**

**BRF-0137(5)2**

**SECTION 01721M**

**SURVEY**

**Delete Article 1.1, Paragraph A., and replace with the following:**

- A. Schedule, coordinate, and provide all construction surveying, staking, measurement, and calculations essential to complete the project and properly control the entire work.

**Delete Article 1.5, Paragraph F and G and replace with the following:**

- F. After project completion, return to the Engineer all surveying and design data and provide a red-lined hard copy plan set showing as-constructed features denoting changes from the original design.

**Delete Article 3.3, Paragraph C.**

**Delete Article 3.11, and replace with the following:**

**3.11 GUARDRAIL AND CRASH CUSHION**

- A. Stake guardrail vertical and horizontal control at a maximum spacing of 25 ft on tangent sections and 10 ft on curved sections unless otherwise approved.
- B. Obtain Engineer's approval and field verification of staking prior to installation.

**SPECIAL PROVISION**

**BRF-0137(5)2**

**SECTION 02645S**

**BOX CULVERT BARREL**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Material and procedures for constructing the cast-in-place reinforced concrete box culvert barrel as detailed in the plans or substituting a prefabricated pre-cast reinforced concrete box culvert barrel with post tensioning in it's place.
- B. If the Contractor elects to furnish and install pre-cast reinforced concrete box culvert barrel, this work will consist of the manufacture, storage, delivery, installation, and assembly of pre-cast reinforced concrete box culvert barrel segments into one continuous unit by post tensioning, which is the type and size shown on the plans. If indicated, end sections of pre-cast box culvert barrel sections will be detailed to allow full attachment of box culvert curbs, haunches, and wing walls which will be placed in the field per other pay items.

**1.2 RELATED SECTIONS**

- A. Section 02056: Common Fill.
- B. Section 02317: Structural Excavation.
- C. Section 02324: Compaction.
- D. Section 03055: Portland Cement Concrete.
- E. Section 03211: Reinforcing Steel and Welded Wire.
- F. Section 03310: Structural Concrete
- F. Section 03390: Concrete Curing.

### **1.3 REFERENCES**

- A. AASHTO M 198: Joints for Circular Concrete Sewer and Culvert Pipe Using Flexible Watertight Gaskets.
- B. AASHTO M 259: Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers.
- C. AASHTO M 273: Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers with Less Than 2 Feet Of Cover Subjected to Highway Loadings.

### **1.4 SUBMITTALS**

If the Contractor elects to furnish and install pre-cast concrete box culvert barrel, the design calculations and working drawings will be submitted in accordance with the requirements include, but not be limited to, the following information:

- A. Shop Drawings: Furnish to the Engineer.
  - 1. Shop drawings: 1 full-size 24 inch by 36 inch, and 4 half-size 11-1/2 inch by 17 inch sheets with a 1-1/2 inch blank margin on the left-hand edge.
  - 2. Place the State project designation data in the lower right-hand corner of each sheet.
  - 3. Prepare shop drawings and supporting computations under seal of a registered Professional Engineer having at least 5 years experience in structural design of the type of pre-cast structures or components proposed.
- B. Department rejects units fabricated prior to written approval.

### **1.5 ACCEPTANCE**

- A. Department rejects pre-cast concrete box culvert barrel segments with an average compressive strength of the three cylinders that is less than 5000 psi.

## **PART 2 PRODUCTS**

### **2.1 BOX CULVERT BARREL SELECTION**

- A. At the preconstruction meeting, declare choice of box culvert barrel construction.

## **2.2 CONCRETE**

- A. Cast-In-Place Concrete: Class AA(AE). Follow Section 03055 and Section 03310.
- B. Pre-cast Concrete: Class 4A(AE). Follow Section 03055.

## **2.3 REINFORCING STEEL AND WELDED WIRE**

- A. Refer to Section 03211.
- B. Meet AASHTO M 259, and AASHTO M 273.

## **2.4 POST-TENSIONING STRANDS**

- A. Seven (7) wire strands for post-tensioning will conform to the requirement of ASTM A416, Grade 270.

## **2.5 ANCHORAGE ASSEMBLY**

- A. All components comprising an anchorage assembly will be capable of developing 95 percent of the ultimate strength of the attached strands without visible deformation, and will be furnished complete with all necessary fittings.
- B. All deformed steel bars or structural shapes that are required for distributing end anchorage loads will be designed by the manufacturer of the post-tensioning system.

## **2.6 POST-TENSIONING DUCTS**

- A. Sheathing for the ducts will be galvanized ferrous metal, fabricated with either welded or interlocking seams, and of the proper dimensions specifically manufactured for this purpose. Coupling for ducts will be watertight.
- B. Each duct and anchorage will be capable of accommodating the number of strands required to produce the final post-tensioning force indicated on the plans, and will be installed by the Contractor at the locations shown on the plans.

## **2.7 GROUT FOR POST-TENSIONING METAL CONDUIT**

- A. The Contractor will design and submit to the Engineer the exact proportions of the materials he proposes to use. The grout mix will consist of a mixture of Portland cement, water, and expansive admixture approved by the Engineer. The grout mix will conform to the following requirements:

1. The grout mix will have an unrestrained volumetric expansion of not less than 3 percent nor more than 8 percent.
  2. The grout mix will have a minimum 28 day compressive strength of 4500 psi, when tested by methods conforming to the requirements of ASTM C 109, except that the materials will conform to the Contractor 's design.
  3. The water content of the grout will be kept as low as possible for proper grouting. However, it will not exceed 5 gallons per sack of cement.
- B. The Contractor may substitute a grout mix especially manufactured for grouting pre-stressed tendons, conforming to the requirements stated herein.
- C. The Contractor will provide a Certified Test Report that the mix submitted will meet the requirements stated herein in conformance with the requirements set forth in SECTION 01455, PART 1-1.7. The Contractor will provide, when requested by the Engineer, samples of the grout mix for testing and approval.
- D. Water will conform to the requirements of SECTION 03055 PART 2-2.5. Chlorides, Fluorides, Sulfates, and Nitrates will not be used.
- E. Portland cement for grout will be Type I or Type II cement conforming to the requirements of SECTION 03055 PART 2-2.1.
- F. Zinc rich paint for anchorage plates will conform to the requirements of Federal Specification TT-P-641, Type I.

## **2.8 QUALITY ASSURANCE**

- A. Department pre-qualifies manufacturers of pre-cast concrete box culvert sections as a supplier of pre-cast concrete products in accordance with " Quality Management Plan: Pre-cast / Pre-stressed Concrete Structures."
- B. Permanently mark each precast unit with date of casting and identification number supplied by the inspector. Stamp markings in fresh concrete.
- C. Prevent cracking or damage during handling and storage of precast segments so that damage will not occur to the concrete or reinforcing steel.
- D. Replace cracked or damaged precast segments by improper storing, handling, transporting, or erection at no additional cost to the Department.
- E. Do not ship segments until the 28-day minimum compressive strength is attained. Provide 24-hour advance notice of loading and shipping schedule. Upon delivery

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to the project site, epoxy coated reinforcing steel will be covered with an opaque covering. In addition, epoxy coated reinforcing steel has been partially embedded in concrete or placed in formwork and not covered with concrete will have the exposed surfaces covered with an opaque covering prior to 30 days exposure to sunlight. The opaque coverings will be placed in a manner to provide air circulation and prevent condensation on the reinforcing steel.

## **PART 3 EXECUTION**

### **3.1 MANUFACTURE**

Construct cast-in-place reinforced concrete box culvert barrel as shown in the Plans. Manufacture the pre-cast reinforced concrete box culvert barrel in accordance with the following information:

- A. Meet AASHTO M 259, and AASHTO M 273.
  - 1. Multiply steel reinforcement requirements shown in table by 1.25.
  - 2. Minimum reinforcing steel spacing 4 inches around circumference and 8 inches longitudinally.
  - 3. Use 1-inch minimum concrete cover to reinforcing steel.
- B. Portland Cement Concrete: Follow Section 03055.
- C. Concrete Curing: Follow Section 03390.

### **3.2 INSTALLATION**

- A. Installation with 2 ft or less cover, follow AASHTO M 273.
- B. Installation with greater than 2 ft of cover, follow AASHTO M 259.

### **3.3 STEEL REINFORCEMENT**

- A. Follow Section 03211.

### **3.4 CONSTRUCTION METHODS**

The fabrication and placement of the pre-cast box culvert barrel segments will conform to SECTION 03412 except as follows:



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- A. Shop drawings: Before construction, the contractor will submit shop drawings to the Engineer for approval in accordance with SECTION 00727. These drawings will include, but not be limited to, the following information:
1. Complete details of the method, materials, and equipment the Contractor proposes to use in the pre-stressing post-tensioning, grouting operation. Such details will outline the sequence for grouting of conduits and the method of sequence of stressing, jacking force, strain due to jacking and effective force for each tendon, and give complete Specifications and details of the pre-stressing steel and anchorage devices and other data pertaining to the post-tensioning operation.
  2. The size of the anchorage assemblies and pockets will be detailed.
  3. The details for splicing the post-tensioning ducts at the pre-cast box culvert barrel segment joints.
  4. The manner of securing the conduit and other components into place.
  5. Type and location of lifting inserts or devices.
- B. Design computations: One (1) set of design computations for the proposed method of post-tensioning will be submitted with the shop drawings. The design computations will be signed and sealed by a licensed Professional Engineer registered in the State of Utah, and will include but not be limited to the following information:
1. Computed losses for each tendon such as creep and shrinkage of concrete, elastic shortening, relaxation of steel, losses in post-tensioned pre-stressing steel due to sequence of stressing, friction and take up of anchorages, and other losses peculiar to the method or system of pre-stressing that may take place or have been provided for.
  2. Jacking force for each tendon.
  3. Effective force for each tendon.
  4. Anchorage bearing stress at service load.
  5. All other computations required for the system of pre-stressing being used, including all reinforcing required to resist bursting stresses.
- C. Post tensioning design based on following criteria:
1. The total post tension force is the sum of the force required to overcome soil friction plus the force required to create a pressure of 10 psi over the cross section of the culvert barrel.
  2. Maximum total post tension force should not create a pressure greater 100 psi over the cross section of the culvert barrel.
  3. Maximum load on a ½ inch diameter tendon is 30,983 lbs.
  4. Use a coefficient of soil friction of 0.5.
  5. Place tendons symmetrically.

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6. Use minimum of 4 tendons.
  7. Maximum tendon spacing of 8 feet (except for culverts less than 12 foot span).
  8. Minimum tendon spacing of 2 feet.
- D. Sequence of construction: Before construction, the Contractor will submit a detailed sequence of construction to the Engineer for approval. The sequence of construction will include, but not be limited to the following information:
1. Sequence and methods for removal of the existing bridge.
  2. Sequence and methods for placement of the pre-cast barrel segments.
  3. Approximate locations of the cranes.
  4. Sequence and methods for post-tensioning of pre-cast barrel segments.
- E. Fabrication:
1. All ducts and other components of the post-tensioning system will be tied securely into place at the intervals shown on the shop drawings. Concrete will not be deposited in the forms until the Engineer has inspected and approved the placement of ducts, anchorages, and all other materials in the box culvert barrel segments.
  2. All holes, openings, and indentations in the post-tensioning duct will be repaired prior to placing the concrete. Holes or openings less than  $\frac{1}{4}$  inch may be repaired with several wraps of waterproof tape. Holes or openings larger than  $\frac{1}{4}$  inch will be repaired with a split sleeve which overlap itself by 3 inches, extend at least 3 inches on either side of the hole, be secured to the duct and sealed with waterproof tape. Indentations cannot be repaired will be cut out and repaired as required above for holes larger than  $\frac{1}{4}$  inch. All repairs will be subject to the approval of Engineer.
  3. After installation in the forms, the ends of the ducts will be covered as necessary at all times to prevent the entry of concrete or debris.
- F. Placing pre-cast box culvert barrel segments:
1. The pre-cast box culvert barrel segments will be placed as shown on the plans. The post-tensioning ducts will be made continuous between pre-cast box culvert barrel segments with watertight sleeves.
  2. No construction equipment, materials will be allowed on the top of barrel until the post-tensioning process is complete.
- G. Jointing pre-cast box culvert barrel segments:

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1. The key spaces and recesses between the barrel segments will be thoroughly cleaned out. Snug fit all joints of box culvert barrel segments before post-tensioning.
2. The post-tensioning strands in each duct will be jacked simultaneously to the jacking force shown on the shop drawings.
3. The Contractor will certify to the Engineer that a skilled representative of the pre-stressing manufacturer will be available to the Contractor to give such aid and instructions in the use of the pre-stressing equipment and installation of materials as is required to obtain satisfactory results.
4. The skilled representative will be present during the initial placing of pre-stressing tendons, the stressing of the tendons, and the grouting of the ducts. The representative will remain on the job until, in the opinion of the Engineer, each operation is proceeding smoothly and the workman are familiar with the work required for each operation. The Contractor will also arrange to have the representative present at such other times as the Engineer may request.
5. The tendons will be stressed in order indicated on the shop drawings so that lateral eccentricity of the pre-stress will be a minimum.
6. The Contractor is instructed that special handling is required of all pre-stressing tendons and related components. Any tendon, or component thereof, becoming kinked, deformed, or otherwise damaged will be rejected. Tools would mar or damage the tendons will not be used.
7. All pre-stressing steel will be protected against rust or other results or corrosion at all times from manufacture to grouting or encasing in concrete. The development of visible rust or other results of corrosion will be cause for rejection, when ordered by the Engineer. A light coating of surface rust is acceptable if it can be removed completely from the tendon by wiping with a cloth provided that there is no visible pitting.
8. The shipping package or form will be clearly marked with a statement that the package contains high strength pre-stressing steel, and the type of corrosion inhibitor used, including the date packaged.
9. Welding to or near the pre-stressing tendon is not permitted because of the possibility of arcing. If arcing causes damage to the pre-stressing tendon, the tendon will be replaced. The duct, tendons, or other components will be completely free from oil, grease, and other foreign material. Any cleaning required must be done in the manner approved by the Engineer.
10. Pre-stressing will be done with approved hydraulic jacking equipment. All jacks will be equipped with accurate pressure gauges. All combinations of jacks and gauges will have been calibrated by an approved testing agency no more than two (2) months prior to start of the pre-stressing operations on this project. All combinations of jacks and gauges will be recalibrated, after being six calendar months on the same project. The Contractor will furnish to the Engineer, certified and notarized calibration charts and tables for each combination of jack and gauge. The Engineer reserves the

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right to check the calibrations at any time to assure himself of their accuracy.

11. Pre-stressing tendons will be tensioned by jacking at each end of the tendon. Such jacking of both ends need not be done simultaneously. The tensioning process as applied to the post-tensioning will be so conducted that tension being applied and the elongation of the tendon may be measured at all times.
12. The pre-stressing forces will be measured by the calibrated pressure gages. An initial force, sufficient to remove any slack from the tendon will be applied. The strain between the initial force and the total required force will be measured. A record will be kept of gage pressures and elongations at all times and will be submitted to the Engineer.
13. Following approval of the elongation measurements and anchorage of the tendons, the protruding ends of tendons will be cut in the manner noted on the shop drawings. A projection of at least 1-inch, preferably more, beyond the anchorage wedge must remain.
14. The ends of the post-tensioning anchorages, anchorage plates, and a 1-inch strip of adjoining concrete will be cleaned and painted. Cleaning will be by wire brushing or abrasive blast cleaning to remove all dirt and residue are not firmly bonded to the metal or concrete surfaces. The surfaces will be covered with one thick application of zinc-rich paint. The paint will be thoroughly mixed at the time of application, and will be worked into any voids in the pre-stressing tendons.

#### H. Grouting post-tensioning ducts:

1. The need for and design of grout tubes, vent tubes, drain tubes will be determined by the manufacturer of the post-tensioning system.
2. The ends of the grout tubes, vent tubes, drain tubes will be threaded and the exposed ends fitted with valves.
3. Connections to ducts will be made with metallic or plastic structural fasteners. Plastic components, if selected, will not react with the concrete or enhance corrosion of the pre-stressing steel, and will be free of water-soluble chlorides. The vents will be mortar tight, taped as necessary, and will provide means for injection of grout through the vents and for sealing the vents. Ends of vents will be removed 1-inch below the concrete surface after grouting has been completed.
4. All water used for flushing ducts will contain either quick lime (calcium oxide) or slaked lime (calcium hydroxide) in the amount of 0.1-pound per gallon. All compressed air used to blow out ducts will be oil free.
5. The temperature of the box culvert barrel segments at the time of grouting will be above 35 degree F. The temperature of the grout during mixing and pumping will not be above 95 degree F.

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6. The mixer for the grout will be a high-speed mixer specifically designed for grouting of post-tensioning ducts. The mixer will be capable of producing grout free of lumps and un-dispersed cement.
7. The pump for the grout will be of the positive displacement type, and will be able to produce an outlet gage pressure of at least 150 psi.
8. The pump will have seals adequate to prevent the loss of grout and also to prevent the introduction of oil, air, or other foreign substances into the grout.
9. The grouting equipment will utilize gravity feed to the pump inlet.
10. During the grouting operation, standby water flushing equipment will be provided. The water flushing equipment will be in addition to, and separate from, the grouting equipment; will use a different power source than the grouting equipment; will have sufficient capacity to flush out any partially grouted enclosures when blockage or breakdown of grouting equipment occurs, and will be capable of developing a gage pressure of at least 250 psi.
11. The ingredients will be added to the mixer in the following order: (1) water, (2) cement, (3) admixture. The ingredients will be mixed sufficiently to produce a uniform thoroughly blended grout with a minimum of air entrapped. Excessive temperature rise due to extended mixing will be avoided. After mixing, the grout will be passed through a strainer into pumping equipment which provides for recirculation. No additional water will be added to the grout after mixing.
12. Grouting operation will not start before the post-tensioning operation is complete.
13. The valves on all outlet tubes (drain, vent, and grout tubes) will be closed except for the outlet tube closest to the grouting and of the conduit which will be open. The initial pump gage pressure will be less than 40 psi, and will gradually be increased until steady stream of grout, free of air and diluted grout, flows from the outlet tube. The outlet tube will be closed and simultaneously, the next outlet tube, in the direction of flow of grout, will be opened.
14. This process will be repeated for each of the outlet tubes until the grout tube at the far end of the duct becomes an outlet tube. Pumping will continue until the flow from the outlet tube becomes uniform and free from air and diluted grout.
15. An on-line device to limit the grout pumping gage pressure will be set at a maximum of 150 psi. If the grout reaches the limiting pressure, the grouting operation will be stopped and the grout flushed from the entire conduit. The grouting operation will not resume until the restriction is located and corrected by the Contractor.
16. At the completion of the grouting, all valves will remain closed until the grout has cured, except the grout tubes at each end of the duct, which will remain open during the curing of the grout.

### **3.5 CONNECTION TO CAST-IN-PLACE CONCRETE**

- A. Where pre-cast box culvert barrel segments join cast-in-place concrete, project the reinforcing steel a minimum of 12 inches out of the precast box culvert barrel segment and square off the concrete face.

### **3.6 LIFTING HOLES**

- A. A maximum of four lifting holes may be provided in the top slab, each having a maximum diameter of 3 inches.
- B. Locate holes to avoid interference with the reinforcing steel.
- C. Plug holes with a 1/1 sand to cement grout.

### **3.7 REPAIRS**

- A. Box culvert barrel segments may be repaired as allowed in the referenced specification only when approved in advance by the Engineer.
- B. Making repairs in advance of approval will be cause for rejection.

### **3.8 MINIMUM LENGTH**

- A. Individual box culvert barrel segment: None less than 5 ft.

### **3.9 CURBS**

- A. If indicated, provide curbs on top of box culvert barrel end segments, reinforced as shown on the plans.

### **3.10 BEDDING AND BACKFILL**

- A. Excavate the material under the box culvert barrel location in compliance with Section 02317, Paragraph 3.2, "Excavation" to a minimum depth of 4 inches.

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B. Backfill with granular backfill borrow as specified in Section 02056, Paragraph 2.3 and Section 02061, Paragraph 2.1.

C. Compact following Section 02324

**3.11 HAUNCHES**

If indicated, provide cast-in-place concrete haunches at each end of the barrel as shown on the plans.

**3.12 WINGWALLS**

If indicated, provide cast-in-place concrete wing walls as shown on the plans.

END OF SECTION

January 1, 2005

**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 02742S**

**PROJECT SPECIFIC SURFACING REQUIREMENTS**

**Add Section 02742:**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Required PG Asphalt or emulsion.
- B. Number of gyrations to use for Superpave Mix Design.

**PART 2 PRODUCTS**

**2.1 MIXES**

- A. Hot Mix Asphalt (HMA): (Refer to bid item for size)
  - 1. PG \_\_\_\_64-34\_\_\_\_ Asphalt.
  - 2. N<sub>initial</sub> \_ 6/<91.5 \_ N<sub>design</sub> \_\_50/69\_\_ N<sub>final</sub> \_\_\_\_75/<98\_\_\_\_
- B. Open-Graded Surface Course:
  - 1. PG \_\_\_\_\_ Asphalt.
- C. Chip Seal
  - 1. Type of asphalt emulsion \_\_\_\_

**PART 3 EXECUTION Not used**

**END OF SECTION**



April 12, 2005

**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 02745S**

**ASPHALT MATERIAL**

**Delete section 02745 in its entirety and replace with the following:**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Asphalt materials

**1.2 PAYMENT PROCEDURES**

- A. Price adjustments for asphalt cement and liquid asphalt (chip-seal emulsions and/or cut-backs):
  - 1. Standard department procedures governs price adjustments made where asphalt material does not conform to the specifications
    - a. If the price adjustment exceeds 30 percent, the Engineer may order the removal of any or all the defective asphalt material.
    - b. The pay factor for such material is 0.50 when allowed to remain in place.
- B. Price adjustments for Performance Graded Asphalt Binder (PGAB):
  - 1. Standard department PGAB management plan governs price reductions or removal of material where the binder does not conform to the specifications.

**1.3 REFERENCES**

- A. AASHTO M 81: Cut-Back Asphalt (Rapid-Curing Type)
- B. AASHTO M 82: Cut-Back Asphalt (Medium-Curing Type)
- C. AASHTO M 140: Emulsified Asphalt
- D. AASHTO M 208: Cationic Emulsified Asphalt

- E. AASHTO M 226: Viscosity Graded Asphalt Cement
- F. AASHTO M 320: Performance Graded Asphalt Cement
- G. AASHTO R 28: Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)
- H. AASHTO T 44: Solubility of Bituminous Materials
- I. AASHTO T 48: Flash and Fire Points by Cleveland Open Cup
- J. AASHTO T 49: Penetration of Bituminous Materials
- K. AASHTO T 50: Float Test for Bituminous Materials
- L. AASHTO T 51: Ductility of Bituminous Materials
- M. AASHTO T 59: Testing Emulsified Asphalt
- N. AASHTO T 201: Kinematic Viscosity of Asphalts
- O. AASHTO T 228: Specific Gravity of Semi-Solid Bituminous Materials
- P. AASHTO T 240: Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin-Film Oven Test)
- Q. AASHTO T 300: Force Ductility of Bituminous Materials
- R. AASHTO T 301: Elastic Recovery Test of Bituminous Materials by Means of a Duclilometer
- S. AASHTO T 313: Determining the Flexural Creep Stiffness of Asphalt Binder Using the Bending Beam Rheometer (BBR)
- T. AASHTO T 314: Determining the Fracture Properties of Asphalt Binder in Direct Tension
- U. AASHTO T 315: Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
- V. AASHTO T 316: Viscosity Determination of Asphalt Binder Using Rotational Viscometer
- W. ASTM D 92: Flash and Fire Points by Cleveland Open Cup

- X. ASTM D 1190: Concrete Joint Sealer, Hot-Applied Elastic Type
- Y. ASTM D 2006-70: Method of Test for Characteristic Groups in Rubber Extender and Processing Oils by the Precipitation Method.
- Z. ASTM D 2007: Characteristic Groups in Rubber Extender and Processing Oils and Other Petroleum-Derived Oils by the Clay-Gel Absorption Chromatographic Method
- AA. ASTM D 2026: Cutback Asphalt (Slow-Curing Type)
- BB. ASTM D 3405: Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements
- CC. ASTM D 4402: Viscosity Determinations of Unfilled Asphalts Using the Brookfield Thermosel Apparatus
- DD. ASTM D 5329: Sealants and Fillers, Hot-Applied, For Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements
- EE. ASTM D 5801: Toughness and Tenacity of Bituminous Materials
- FF. California Test Methods
- GG. UDOT Materials Manual of Instruction
- HH. UDOT Minimum Sampling and Testing Guide

#### **1.4 SUBMITTALS**

- A. For each shipment of material, supply a vendor-prepared bill of lading showing the following information:
  - 1. Type and grade of material
  - 2. Type and amount of additives, used, if applicable
  - 3. Destination
  - 4. Consignee's name
  - 5. Date of Shipment
  - 6. Railroad car or truck identification
  - 7. Project number
  - 8. Loading temperature
  - 9. Net weight in tons (or net gallons corrected to 60 degrees F, when requested)
  - 10. Specific gravity
  - 11. Bill of lading number
  - 12. Manufacturer of asphalt material

## **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Each shipment of asphalt material must:
  - 1. Be uniform in appearance and consistency.
  - 2. Show no foaming when heated to the specified loading temperature.
- B. Do not supply shipments contaminated with other asphalt types or grades than those specified.

## **1.6 GRADE OF MATERIAL**

- A. The Engineer determines the grade of material to be used based on the supply source designated by the Contractor when the bid proposal lists more than one grade of asphalt material.

## **PART 2 PRODUCTS**

### **2.1 PERFORMANCE GRADED ASPHALT BINDER (PGAB)**

- A. Supply PGABs under the Approved Supplier Certification (ASC) System. Refer to the UDOT Minimum Sampling and Testing Guide, Section 509, Asphalt Binder Management Plan.
- B. As specified in AASHTO M 320 for all PGABs having algebraic differences less than 92 degrees between the high and low design temperatures.
- C. As specified in Tables 1, 2, 3, 4, 5, 6, 7, and 8 for all PGABs having algebraic differences equal to or greater than 92 degrees between the high and low design temperatures.

**Table 1**

**PG58-34**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@58°C, G*, kPa	1.30 Min.
	@58°C, phase angle, degrees	74.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@5°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	65 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@16°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-24°C, S, MPa	300 Max.
	@-24°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-24°C, Failure Strain, %	1.5 Min.
	@-24°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissor...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 2**

**PG64-28**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*, kPa	1.30 Min.
	@64°C, phase angle, degrees	74.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	65 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@22°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-18°C, S, MPa	300 Max.
	@-18°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-18°C, Failure Strain, %	1.5 Min.
	@-18°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 3****PG64-34**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*, kPa	1.30 Min.
	@64°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T-240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@64°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	70 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@19°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-24°C, S, MPa	300 Max.
	@-24°C, m-value	0.300 Min.
	@-24°C, Failure Strain, %	1.5 Min.
Direct Tension Test, AASHTO T 314	@-24°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 4****PG70-22**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*, kPa	1.30 Min.
	@70°C, phase angle, degrees	74.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	65 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@28°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-12°C, S, MPa	300 Max.
	@-12°C, m-value	0.300 Min.
	@-12°C, Failure Strain, %	1.5 Min.
Direct Tension Test, AASHTO T 314	@-12°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 5****PG70-28**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*, kPa	1.30 Min.
	@70°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	70 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@25°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-18°C, S, MPa	300 Max.
	@-18°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-18°C, Failure Strain, %	1.5 Min.
	@-18°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

**Table 6****PG70-34**

<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*, kPa	1.30 Min.
	@70°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135 °C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@70°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	75 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@22°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-24°C, S, MPa	300 Max.
	@-24°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-24°C, Failure Strain, %	1.5 Min.
	@-24°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

Table 7

## PG76-22

PG76-22		
<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*, kPa	1.30 Min.
	@76°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	70 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@ 31°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-12°C, S, MPa	300 Max.
	@-12°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-12°C, Failure Strain, %	1.5 Min.
	@-12°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		

Table 8

## PG76-28

PG76-28		
<b>Original Binder</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*, kPa	1.30 Min.
	@76°C, phase angle, degrees	71.0 Max.
Rotational Viscometer, AASHTO T 316	@135°C, Pa.s	3 Max.
Flash Point, AASHTO T 48	°C	260 Min.
<b>RTFO Residue, AASHTO T 240</b>		
Dynamic Shear Rheometer, AASHTO T 315	@76°C, G*/sinδ, kPa	2.20 Min.
Elastic Recovery, AASHTO T 301 mod <sup>1</sup>	%	75 Min.
<b>PAV Residue, 20 hours, 2.10 Mpa, 100 °C, AASHTO R 28</b>		
Dynamic Shear Rheometer, AASHTO T 315	@28°C, kPa	5000 Max.
Bending Beam Rheometer, AASHTO T 313	@-18°C, S, MPa	300 Max.
	@-18°C, m-value	0.300 Min.
Direct Tension Test, AASHTO T 314	@-18°C, Failure Strain, %	1.5 Min.
	@-18°C, Failure Stress <sup>2</sup> , MPa	4.0 Min.
<sup>1</sup> Modify paragraph 4.5 as follows: After 20 cm has been reached, stop the ductilometer and within 2 seconds, sever the specimen at its center with a pair of scissors...		
<sup>2</sup> No allowances will be given for passing at a colder grade		



## 2.2 ASPHALTIC CEMENT, LIQUID ASPHALTS, REJUVENATING AGENTS

- A. As specified in AASHTO M 226, Table 2 with the following modifications:
1. Delete and replace ductility at 77°F (25°C) with ductility at 39.2°F (4°C) with values as detailed below.

<u>AC - 2.5</u>	<u>AC - 5</u>	<u>AC - 10</u>	<u>AC - 20</u>
50+	25+	15+	5+

- B. As specified for cationic and anionic emulsified asphalt.
1. All standard Slow Setting (SS, CSS), Medium Setting (MS, CMS), and Rapid Setting (RS, CRS) grades; inclusive of all High-Float designations (HF).
  2. Supply under the Approved Supplier Certification System (ASC).
  3. Meet AASHTO M 208 and M 140.
- C. Conform to the requirements of one of these tables:
1. Table 9: Cationic Rapid Setting Emulsified Polymerized Asphalt (CRS-2P)
  2. Table 10: Latex Modified Cationic Rapid Setting Emulsified Asphalt (LMCRS-2)
  3. Table 11: Cationic Medium Setting Emulsified Asphalt (CMS-2S)
  4. Table 12: High Float Medium Setting Emulsified Asphalt (HFMS-2)
  5. Table 13: High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2P)
  6. Table 14: High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2SP)
  7. Table 15: High Float Rapid Setting Emulsified Polymerized Asphalt (HFRS-2P)
  8. Table 16: Cationic Rapid Setting Emulsified Asphalt (CRS-2A, B)
- D. Curing cut-back asphalt:
1. As specified for slow curing (SC) in ASTM D 2026.
  2. As specified for medium curing (MC) in AASHTO M 82.
  3. As specified for rapid curing (RC) in AASHTO M 81.
- E. Conform to requirements for Emulsified Asphalt Pavement Rejuvenating Agent:
1. Table 17: Type A
  2. Table 18: Type B
  3. Table 19: Type B Modified
  4. Table 20: Type C
  5. Table 21: Type D

**Table 9**

<b>Cationic Rapid Setting Emulsified Polymerized Asphalt (CRS-2P)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity , SF, 140EF (60EC), s (Project-site Acceptance/Rejection Limits)	T 59	100	400
Settlement (a) 5 days, percent	T 59		5
Storage Stability Test (b) 1 d, 24 h, percent	T 59		
Demulsibility (c) 35 ml, 0.8% sodium dioctyl Sulfosuccinate, percent	T 59	40	
Particle Charge Test	T 59	Positive	
Sieve Test, percent	T 59		0.10
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent			0
Residue (d), percent		68	
<b>Residue from Distillation Test</b>			
Penetration, 77EF(25EC), 100 g, 5 s, dmm	T 49	80	150
Ductility, 39.2EF(4EC), 5 cm/min, cm	T 51	35	
Toughness, lb-in	ASTM D 5801	75	
Tenacity, lb-in	ASTM D 5801	50	
Solubility in trichloroethylene, percent	T 44	97.5	
<p>(a) The test requirement for settlement may be waived when the emulsified asphalt is used in less than a five-day time; or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than 5 days.</p> <p>(b) The 24-hour (1-day) storage stability test may be used instead of the five-day settlement test.</p> <p>(c) The demulsibility test is made within 30 days from date of shipment.</p> <p>(d) Distillation is determined by AASHTO T 59, with modifications to include a <math>350 \pm 5^{\circ}\text{F}</math> (<math>177 \pm 3^{\circ}\text{C}</math>) maximum temperature to be held for 15 minutes.</p> <p>Modify the asphalt cement prior to emulsification.</p>			

**Table 10**

<b>Latex Modified Cationic Rapid Setting Emulsified Asphalt (LMCRS-2)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s– (Project Site Acceptance/Rejection Limits)	T 59	140	400
Settlement (a) 5 days, percent	T 59		5
Storage Stability Test (b) 1 d, 24 h, percent	T 59		1
Demulsibility (c) 35 ml, 0.8% sodium dioctyl Sulfosuccinate, percent	T 59	40	
Particle Charge Test	T 59	Positive	
Sieve Test, percent	T 59		0.3
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent			0
Residue (d), percent		65	
<b>Residue from Distillation Test</b>			
Penetration, 77EF (25EC), 100 g, 5 s, dmm	T 49	40	200
Torsional Recovery (e)		18	
<p>(a) The test requirement for settlement may be waived when the emulsified asphalt is used in less than a five-day time; or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than 5 days.</p> <p>(b) May use the 24-hour (1-day) storage stability test instead of the five-day settlement test.</p> <p>(c) Make the demulsibility test within 30 days from date of shipment.</p> <p>(d) Determine distillation by AASHTO T 59, with modifications to include a <math>350 \pm 5^{\circ}\text{F}</math> (<math>177 \pm 3^{\circ}\text{C}</math>) maximum temperature to be held for 15 minutes.</p> <p>(e) CA 332 (California Test Method)</p>			
<b>Co-mill latex and asphalt during emulsification</b>			

**Table 11**

<b>Cationic Medium Setting Emulsified Asphalt (CMS-2S)</b>		
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Specification</b>
<b>Emulsion</b>		
Viscosity, SF, 122EF (50EC), s	T 59	50 - 450
Percent residue	T 59	60 min
Storage Stability Test, 1d, 24h, percent	T 59	1 max
Sieve, percent	T 59	0.10 max
Particle charge	T 59	Positive
Oil Distillate, percent by volume of emulsion	T 59	5-15
<b>Residue</b>		
Penetration, 77EF (25EC), 100g, 5 sec, dmm	T 59	100-250
Solubility, percent	T 59	97.5 min.

**Table 12**

<b>High Float Medium Setting Emulsified Asphalt ( HFMS-2)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122°F (50°C), s (Project Site Acceptance/Rejection Limits)	T59	70	300
Storage Stability Test, 1d, 24 h, percent	T59		1.0
Sieve Test , percent	T59		0.1
<b>Distillation</b>			
Oil Distillate, by volume of emulsion, percent	T59	NA	NA
Residue, percent	T59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77°F (25°C), 100g, 5 s, dmm	T49	50	200
Float Test, 140°F (60°C), s	T50	1200	
Solubility in Trichloroethylene, percent	T44	97.5	
Ductility, 77°F (25°C) 5cm/min, cm	T51	40	

**Table 13**

<b>High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2P) (a)</b>			
<b>Tests</b>	<b>AASHTO Test method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	100	450
Storage Stability Test 1 d, 24 h, percent	T 59		0.1
Sieve Test, percent	T 59		0.1
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59	1	7
Residue (b), percent	T 59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77EF (25EC), 100 g, 5 s, dmm	T 49	70	300
Float Test, 140EF (60EC), s	T 50	1200	300
Solubility in trichloroethylene, percent	T 44	97.5	
Elastic Recovery, 77EF (25EC), percent	T 301	50	
<p>(a) Supply an HFMS-2P (anionic, polymerized, high-float) as an emulsified blend of polymerized asphalt cement, water, and emulsifiers. Polymerize the asphalt cement with a minimum of 3.0% polymer by weight of the asphalt cement prior to emulsification. After standing undisturbed for a minimum of 24 hours, the emulsion shall be smooth and homogeneous throughout with no white, milky separation, pumpable, and suitable for application through a distributor.</p> <p>(b) Determine the distillation by AASHTO T 59, with modifications to include a 350± 5EF (177±3EC) maximum temperature to be held for 15 minutes.</p>			

**Table 14**

<b>High Float Medium Setting Emulsified Polymerized Asphalt (HFMS-2SP) (a)</b>			
<b>Tests</b>	<b>AASHTO Test method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	50	450
Storage Stability Test 1 d, 24 h, percent	T 59		0.1
Sieve Test, percent	T 59		0.1
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59	1	7
Residue (b), percent	T 59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77EF (25EC), 100 g, 5 s, dmm	T 49	150	300 (c)
Float Test, 140EF (60EC), s	T 50	1200	
Solubility in trichloroethylene, percent	T 44	97.5	
Elastic Recovery (d), 77EF (25EC), percent	T 301	50	
<p>(a) Supply an HFMS-2SP (anionic, polymerized, high-float) as an emulsified blend of polymerized asphalt cement, water, and emulsifiers. Polymerize the asphalt cement with a minimum of 3.0% polymer by weight of the asphalt cement prior to emulsification. After standing undisturbed for a minimum of 24 hours, the emulsion shall be smooth and homogeneous throughout with no white, milky separation, pumpable, and suitable for application through a distributor.</p> <p>(b) Determine the distillation by AASHTO T 59, with modifications to include a <math>350 \pm 5</math>EF (<math>177 \pm 3</math>EC) maximum temperature to be held for 15 minutes.</p> <p>(c) When approved by the Engineer, Emulsified Asphalt (HFMS-2SP) with a residual penetration greater than 300 dmm may be used with Cold Bituminous Pavement (Recycle) to address problems with cool weather or extremely aged existing pavement.</p> <p>(d) Report only when penetration is greater than 300 dmm.</p>			

**Table 15**

<b>High Float Rapid Setting Emulsified Polymerized Asphalt (HFRS-2P) (a)</b>			
<b>Tests</b>	<b>AASHTO Test method</b>	<b>Min.</b>	<b>Max.</b>
<b>Emulsion</b>			
Viscosity, SF @ 122EF (50EC), s (Project Site Acceptance/Rejection Limits)	T 59	50	450
Storage Stability Test 1 d, 24 h, percent	T 59		1
Demulsibility 0.02 N Ca Cl <sub>2</sub> , percent	T 59	40	
Sieve Test, percent	T 59		0.1
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59		3
Residue (b), percent	T 59	65	
<b>Residue from Distillation Test</b>			
Penetration, 77°F (25EC), 100 g, 5 s, dmm	T 49	70	150
Float Test, 140EF (60EC), s	T 50	1200	
Solubility in trichloroethylene, percent	T 44	97.5	
Elastic Recovery, 77EF (25EC), percent	T 301	58	
<p>(a) Supply an HFMS-2SP (anionic, polymerized, high-float) as an emulsified blend of polymerized asphalt cement, water, and emulsifiers. Polymerize the asphalt cement with a minimum of 3.0% polymer by weight of the asphalt cement prior to emulsification. After standing undisturbed for a minimum of 24 hours, the emulsion shall be smooth and homogeneous throughout with no white, milky separation, pumpable, and suitable for application through a distributor.</p> <p>(b) Determine the distillation by AASHTO T 59, with modifications to include a <math>350 \pm 5^\circ\text{F}</math> (<math>177 \pm 3^\circ\text{C}</math>) maximum temperature to be held for 15 minutes.</p>			

**Table 16**

<b>Cationic Rapid Setting Emulsified Asphalt (CRS-2A,B)</b>			
<b>Tests</b>	<b>AASHTO Test Method</b>	<b>Min</b>	<b>Max</b>
<b>Emulsion</b>			
Viscosity, SF, 122EF (50EC), s (Project Site Rejection/Acceptance Limits)	T 59	140	400
Storage stability test, 24 h, percent	T 59		1
Demulsibility, 35 mL 0.8 percent Sodium Dioctyl Sulfosuccinate, percent	T 59	40	
Particle charge test	T 59	Positive	
Sieve test, percent	T 59		0.10
<b>Distillation</b>			
Oil distillate, by volume of emulsion, percent	T 59		0
Residue, percent	T 59	65	
Use PG58-22 and PG64-22 as base asphalt cement for CRS-2A, B, respectively. Specification for high temperature performance: original and RTFO G*/sin* within 3EC of grade.			



**Table 17**

<b>Emulsified Type A Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77°F (25°C), s	AASHTO T 59	15 Min. 40 Max.
Residue, percent W (a)	AASHTO T 59	60 Min. 65 Max.
Miscibility Test (b)	AASHTO T-59	No Coagulation
Sieve Test, percent W (c)	AASHTO T 59	0.20 Max.
5-day Settlement, percent W	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
Light Transmittance, %	UDOT MOI 8-973	30 Max.
Cement Mixing	AASHTO T-59	2 Max.
<b>Residue from Distillation (a)</b>		
Viscosity, 140 °F (60°C), mm <sup>2</sup> /s	ASTM D 4402	150 - 300
Flash Point, COC, °F (°C)	AASHTO T 48	385 Min.
Asphaltenes, percent W	ASTM D 2006-70	0.4 Min. 0.75 Max.
Maltene Distribution Ratio (PC + A <sub>1</sub> )/(S + A <sub>2</sub> ) (d)	ASTM D 2006-70	0.3 Min. 0.6 Max.
Saturated Hydrocarbons, S (d)	ASTM D 2006-70	21 Min. 28 Max.
PC/S Ratio (d)	ASTM D 2006-70	1.5 Min.
(a) AASHTO T 59, Evaporation Test, modified as follows: Heat a 50 gram sample to 300 °F until foaming ceases, then cool immediately and calculate results. (b) AASHTO T 59, modified as follows: use a 0.02 Normal Calcium Chloride solution in place of distilled water. (c) AASHTO T 59, modified as follows: use distilled water in place of a two percent sodium oleate solution. (d) Chemical composition by ASTM Method D-2006-70: PC= Polar Compounds,   A <sub>1</sub> = First Acidaffins A <sub>2</sub> = Second Acidaffins,   S = Saturated Hydrocarbons		

**Table 18**

<b>Emulsified Type B Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Tests</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77°F (25°C), s	AASHTO T 59	25-150
Residue(a), percent W	AASHTO T 59	62 Min.
Sieve Test, percent W	AASHTO T 59	0.10 Max.
5-day Settlement	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
Pumping Stability (b)		Pass
<b>Residue from Distillation (a)</b>		
Viscosity @ 140°F (60°C), mm <sup>2</sup> /s	AASHTO T 201	2500-7500
Solubility in 1,1,1 Trichloroethylene, percent	AASHTO T 44	98 Min.
Flash Point, COC	ASTM D 92	204°C, Min.
Asphaltenes, percent W	ASTM D 2007	15 Max.
Saturates, percent W	ASTM D 2007	30 Max.
Aromatics, percent W	ASTM D 2007	25 Min.
Polar Compounds, percent W	ASTM D 2007	25 Min.
(a) Determine the distillation by AASHTO T 59 with modifications to include a 300 ±5°F (149±3°C) maximum temperature to be held for 15 minutes. (b) Test pumping stability by pumping 475 ml of Type B diluted 1 part concentrate to 1 part water, at 77°F (25°C) through a 1/4 inch gear pump operating at 1750 rpm for 10 minutes with no significant separation or coagulation in pumped material.		
Type B: an emulsified blend of, lube oil and/or lube oil extract, and petroleum asphalt.		

**Table 19**

<b>Emulsified Type B Modified Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77°F (25°C), s	AASHTO T 59	50-200
Residue(a), percent W	AASHTO T 59	62 Min.
Sieve Test, percent W	AASHTO T 59	0.20 Max.
5-day Settlement, percent W	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
Pumping Stability (b)		Pass
<b>Residue from Distillation (a)</b>		
Viscosity (c) 275°F (135°C), cP	ASTM D 4402	150 - 300
Penetration, 77°F (25°C), dmm	AASHTO T 49	180 Min.
Solubility in 1,1,1 Trichloroethylene, percent	AASHTO T 44	98 Min.
Flash Point, COC, °F (°C)	AASHTO T 48	400(204) Min.
Asphaltenes, percent W	ASTM D 2007	20-40
Saturates, percent % W	ASTM D 2007	20 Max.
Polar Compounds, percent W	ASTM D 2007	25 Min.
Aromatics, percent W	ASTM D 2007	20 Min.
PC/S Ratio	ASTM D 2007	1.5 Min.
(a) Determine the distillation by AASHTO T 59 with modifications to include a 300±5°F (149±3°C) maximum temperature to be held for 15 minutes. (b) Pumping stability is tested by pumping 475 ml of Type B diluted 1 part concentrate to 1 part water, at 77°F (25°C) through a 1/4 inch gear pump operating at 1750 rpm for 10 minutes with no significant separation or coagulation in pumped material. (c) Brookfield Thermocel Apparatus-LV model. ≥ 50 rpm with a #21 spindle, 7.1 g residue, at > 10 torque		
As required by the Asphalt Emulsion Quality Management Plan, UDOT Minimum Sampling and Testing Guide, Section 508) the supplier certifies that the base stock contains a minimum of 15% by weight of Gilsonite Ore. Use the HCL precipitation method as a qualitative test to detect the presence of Gilsonite.		

**Table 20**

<b>Emulsified Type C Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77°F (25°C), s	AASHTO T 59	10-100
Residue (a), percent W (Type C supplied ready to use 1:1 or 2:1.	AASHTO T 59 (a)	30 Min. 1:1 40 Min. 2:1
Sieve Test, percent W (b)		0.10 Max.
5-day Settlement, percent W	AASHTO T 59	5.0 Max.
Particle Charge	AASHTO T 59	Positive
pH (May be used if particle charge test is inconclusive)		2.0 - 7.0
Pumping Stability (c)		Pass
<b>Tests of Residue from Distillation (a)</b>		
Viscosity, 275°F (135°C), mm <sup>2</sup> /s	AASHTO T 201	475-1500
Solubility in 1,1,1 Trichloroethylene, percent	AASHTO T 44	97.5 Min.
RTFO mass loss, percent W	AASHTO T 240	2.5 Max.
Specific Gravity	AASHTO T 228	0.98 Min.
Flash Point, COC	AASHTO T 48	232 EC, Min.
Asphaltenes, percent W	ASTM D 2007	25 Min., 45 Max.
Saturates, percent W	ASTM D 2007	10 Max.
Polar Compounds, percent W	ASTM D 2007	30 Min.
Aromatics, percent W	ASTM D 2007	15 Min.
(a) Determine the distillation by AASHTO T 59 with modifications to include a 300± 5°F (149 ± 3°C) maximum temperature to be held for 15 minutes. (b) Test method identical to AASHTO T 59 except that distilled water is used in place of 2 % sodium oleate solution. (c) Test pumping stability by pumping 475 ml of Type diluted 1 part concentrate to 1 part water, at 77°F (25°C) through a 1/4 inch gear pump operating at 1750 rpm for 10 minutes with no significant separation or coagulation in pumped material.		
As required by the Asphalt Emulsion Quality Management Plan, UDOT Minimum Sampling and Testing Guide, Section 508), the supplier certifies that the base stock contains a minimum of 10% by weight of Gilsonite ore. Use the HCL precipitation method as a qualitative test to detect the presence of Gilsonite.		

**Table 21**

<b>Emulsified Type D Asphalt Pavement Rejuvenating Agent Concentrate</b>		
<b>Property</b>	<b>Test Method</b>	<b>Limits</b>
Viscosity, SF, 77EF (25EC), s	AASHTO T 59	30-90
Residue, (c) percent W	AASHTO T 59	65
Sieve Test, percent W	AASHTO T 59	0.10 Max.
pH		2.0 - 5.0
<b>Residue from Distillation (c)</b>		
Viscosity, 140EF (60EC), cm <sup>2</sup> /s	AASHTO T 201	300-1200
Viscosity, 275EF (135EC), mm <sup>2</sup> /s	AASHTO T 201	300 Min.
Modified Torsional Recovery (a), (b)	CA 332	40 % Min.
Toughness, 77EF (25EC), in-lb	ASTM D 5801	8 Min.
Tenacity, 77EF (25EC), in-lb	ASTM D 5801	5.3 Min.
Asphaltenes, percent W	ASTM D 2007	16 Max.
Saturates, percent W	ASTM D 2007	20 Max.
(a) California test method #331 for recovery of residue. (b) Torsional recovery measurement to include first 30 seconds. (c) Determine the distillation by AASHTO T 59 with modifications to include a 300±5EF (149±3EC) maximum temperature to be held for 15 minutes.		

## 2.3 HOT-POUR CRACK SEALANT FOR BITUMINOUS CONCRETE

- A. Combine a homogenous blend of materials to produce a sealant meeting properties and tests in Table 22
- B. Packaging and Marking: Supply sealant pre-blended, pre-reacted, and pre-packaged in lined boxes weighing no more than 30 lb.
  1. Use a dissolvable lining that will completely melt and become part of the sealant upon subsequent re-melting.
  2. Deliver the sealant in the manufacturer's original sealed container. Clearly mark each container with the manufacturer's name, trade name of sealant, batch or lot number, and recommended safe heating and application temperatures.

**Table 22**

<b>Hot-Pour Bituminous Concrete Crack Sealant</b>			
<b>Application Properties:</b>			
Workability:	Pour readily and penetrate 0.25 inch and wider cracks for the entire application temperature range recommended by the manufacturer.		
Curing:	No tracking caused by normal traffic after 45 minutes from application.		
Asphalt Compatibility: ASTM D 5329, Section 14.	No failure in adhesion. No formation of an oily ooze at the interface between the sealant and the bituminous concrete or softening or other harmful effects on the bituminous concrete.		
Material Handling:	Follow the manufacturer's safe heating and application temperatures.		
<b>Test Method</b>	<b>Property</b>	<b>Minimum</b>	<b>Maximum</b>
AASHTO T 51	Ductility, modified, 1cm/min, 39.2°F (4°C), cm	30	
UDOT method 967	Cold Temperature Flexibility	no cracks	
AASHTO T 300 (a)	Force-Ductility, lb force		4
ASTM D 5329	Flow 140°F (60°C), 5 hrs 75° angle, mm		3
ASTM D 3405 (b)	Tensile-Adhesion, modified	300%	
AASHTO T 228	Specific Gravity, 60°F (15.6°C)		1.140
ASTM D 5329	Cone Penetration, 77°F (25°C), 150 g, 5 sec., dmm		90
ASTM D 5329	Resilience, 77°F (25°C), 20 sec., percent	30	
ASTM D 4402	Viscosity, 380°F (193.3°C), SC4-27 spindle, 20 rpm, cP		2500
ASTM D 5329	Bond as per ASTM D 1190, Section 6.4		Pass
(a)	Maximum of 4 lb force during the specified elongation of 30 cm @ 1 cm/min, 39.2°F (4°C).		
(b)	Use ASTM D 3405, Section 6.4.1. Delete bond and substitute tensile-adhesion test in accordance to D 5329.		

**PART 3      EXECUTION      Not used**

END OF SECTION

**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 02748M**

**PRIME COAT/TACK COAT**

**Delete Article 2.1, Paragraph A., and replace with the following:**

**2.1 PRIME COAT**

- A. MC-70 or MC-250, meeting the requirements of Section 02745.

**Delete Article 2.2, Paragraph A., and replace with the following:**

**2.2 TACK COAT**

- A. CSS-1h emulsified asphalt meeting the requirements of Section 02745.
  - 1. Diluted 2:1 (two parts concentrate to one part water) by the manufacturer.
    - a) Dilute at terminal only.
    - b) Do not change dilution without obtaining prior written approval from the Engineer.

**Delete Article 3.2, and replace with the following:**

**3.2 APPLICATION**

- A. Apply at the following rates:
  - 1. Prime Coat: 0.5 gal/yd<sup>2</sup>
  - 2. Tack Coat: 0.15 gal/yd<sup>2</sup>

**The above application rates may vary according to field conditions.  
Secure approval for the quantities, rate of application, temperatures, and  
areas to be treated before any application.**
- B. Do not apply prime coat or tack coat:
  - 1. On a wet surface.
  - 2. When the surface temperature is below 50 degrees F.
  - 3. When weather conditions prevent it from adhering properly.

- C. Protect all structures including guardrails, guide posts, etc. from being spattered or marred.
- D. Use a pressure distributor to apply the asphalt in a uniform, continuous spread.
- E. Keep the viscosity between 50 and 100 centistokes. AASHTO T 201.
- F. Immediately apply another application to under primed surface.
- G. Apply a prime or tack coat to all surfaces, including vertical that will come in contact with Hot Mix Asphalt.
- H. Spread blotter material if the prime coat fails to penetrate. Use the quantities required to absorb the excess asphalt.



**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 02765S**

**PAVEMENT MARKING PAINT**

**Delete Section 02765 in its entirety and replace with the following:**

**PART 1      GENERAL**

**1.1      SECTION INCLUDES**

- A.      Furnish Acrylic Water Based pavement marking paint meeting Federal Specification TTP-1952 D and refer to 2.2 for resin requirement.
- B.      Apply to hot mix asphalt or Portland cement as edge lines, center lines, broken lines, guidelines, contrast lines, symbols and other related markings.
- C.      Remove pavement markings.

**1.2      REFERENCES**

- A.      AASHTO M 247: Glass Beads Used in Traffic Paint
- B.      ASTM D 562: Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using the Stormer-Type Viscometer
- C.      ASTM D 2205: Selection of Tests for Traffic Paints
- D.      ASTM D 2743: Uniformity of Traffic Paint Vehicle Solids by Spectroscopy and Gas Chromatography
- E.      ASTM D 2805: Hiding Power of Paints by Reflectometry
- F.      ASTM D 3723: Pigment Content of Water-Emulsion Paints
- G.      ASTM D 3960: Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
- H.      ASTM D 4451: Pigment Content of Paints

- I. ASTM D 5381: X-Ray Fluorescence (XRF) Spectroscopy of Pigments and Extenders
- J. ASTM E 1347: Standard Test Method for Color and Color-Difference Measurement by Tristimulus (Filter) Colorimetry
- K. Federal Standards

### **1.3 ACCEPTANCE**

- A. Provide fixtures (ball valves, gate valves or other) on paint truck for the purposes of obtaining field samples.
- B. Agitate the paint to allow for thorough mixing. Follow paint manufacturer's recommendation for agitation and mixing times.
- C. Stop all agitation before sample is drawn.
- D. All meters on the paint truck must be calibrated annually and certified for application rate verification. Calibration tolerances for meters must be +/- 0.5 pounds per gallon. Keep a clean, legible copy of calibration report with the paint truck. Certifications performed by company personnel, meter calibration companies or UDOT Equipment Certification Unit.
- E. UDOT ENGINEER:
  - 1. Visually inspects each line to verify bead adhesion and compliance with specified line dimensions requirements.
  - 2. Verifies that the paint and beads are being applied within specified tolerances a minimum of once each production day.
  - 3. Verifies quantities used by either method:
    - a. Measuring both paint and bead tanks prior to and after application.
    - b. Witnessing the meter readings prior to and after application.
  - 4. Randomly sample each color of pavement marking paint used, minimum of one sample each per project.
    - a. Use a clean one-pint metal paint can.
    - b. Sample paint immediately after the paint has been completely agitated. (Stop all agitation before drawing the sample)
    - c. Allow a minimum of 10 gallons to be applied prior to taking sample.
    - d. Fill the sample container to within ½ inch of full.
    - e. Seal the containers immediately by tightly attaching the container's lid.
    - f. Submit paint samples to Central Chemistry Lab for acceptance.

- g. For each sample include:
- Project Number
  - Project Name
  - Paint Manufacturer
  - Batch Number
  - Striping Company
  - Color of Paint
  - Est. Quantity
  - Date Sampled
  - Sampler's name

F. Repaint any line or symbol failing to meet bead adherence and dimensional requirements.

G. Price Reductions for Pavement Markings installed below the specified wet mil thickness are outlined in Table I.

<b>Table I - Price Reduction for Wet Mil Thickness</b>	
	Pay Factor
At the specified mil thickness	1.00
1-10 percent below the Specified wet mil thickness	0.75
11-15 percent below the Specified wet mil thickness	0.50
More than 15 percent below the Specified wet mil thickness	Repaint Pavement Markings

H. Price reductions for pavement markings that fail to meet the requirements of Table III are outlined in Table II. When more than one of the requirements of Table III are deficient. The result with the highest price reduction governs.

<b>Table II - Price Reductions</b>	
	Pay Factor
At the specified requirements	1.00
Up to 1 percent deficient	0.90
Up to 2 percent deficient	0.80
Up to 3 percent deficient	0.70
Up to 4 percent deficient	0.60
Up to 5 percent deficient	0.50
More than 5 percent below specified quantitative requirements	Repaint Pavement Markings

## PART 2 PRODUCTS

### 2.1 Manufacturers

- A. Select an acrylic water based pavement marking paint manufacturer, from the Accepted Products Listing (APL) maintained by the UDOT Research Division.

### 2.2 Paint

- A. Follow Federal Standards 595B, 37875, 33538, and 11105. Meet the following requirements for Acrylic Water Based Paint as listed in Table III:

Table III - Paint Requirements				
Property	White	Yellow (lead free)	Black	Test
Pigment: Percent by weight	62.0	62.0	62.0	ASTM D 3723
Total Solids: Percent by weight, minimum	77.0	77.0	77.0	ASTM D 2205
Nonvolatile vehicle: Percent by weight vehicle, minimum*	40.0	40.0	40.0	ASTM D 2205
Viscosity, KU @ 77 degrees F	80 – 95	80 - 95	80 - 95	ASTM D 562
Volatile Organic Content (VOC): lbs/gal, maximum	1.25	1.25	1.25	ASTM D 3960
Titanium Dioxide Content, lbs/gal	1.0 min	0.2 max	N/A	ASTM D 5381
Directional Reflectance : Minimum	92.0	50.0	N/A	ASTM E 1347
Dry Opacity: Minimum (5 mils wet)	0.95	0.95	N/A	ASTM D 2805

\* The binder shall be 100 percent acrylic, a minimum of 40 percent, by weight, as determined by infrared analysis and other chemical analysis available to UDOT (ASTM D 2205). Consisting of either Rohm and Haas Fastrack HD- 21A or Dow DT-400NA.

- B. Additional requirements:
  - 1. Free of lead, chromium, or other related heavy metals ASTM D 5381.
  - 2. ASTM D 2743, ASTM D 4451 and ASTM D 5381: Tests used to verify paint samples meet Accepted Products Listing.

## **2.3 GLASS SPHERE (BEADS) USED IN PAVEMENT MARKING PAINT**

- A. Specific Properties: Meet AASHTO M 247 with the following exceptions.
  - 1. Gradation:

Passing a No. 14 sieve, percent	95 - 100
Passing a No. 16 sieve, percent	80 - 95
Passing a No. 18 sieve, percent	10 - 40
Passing a No. 20 sieve, percent	0 - 5
Passing a No. 25 sieve, percent	0 - 2
  - 2. Beads having a Silane adhesion coating.
  - 3. Roundness - The glass beads will have a minimum of 80 percent true spheres.
- B. Beads used in Temporary Pavement Markings meet AASHTO M 247 Type II uniform gradation.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Line Control.
  - 1. Establish control points at 100 ft intervals on tangent and at 50 ft intervals on curves.
  - 2. Maintain the line within 2 inches of the established control points and mark the roadway between control points as needed.
    - a. Remove paint that is not placed within tolerance of the established control points and replace at no expense to the Department. Refer to article 3.4.
    - b. Maintain the line dimension within 10 percent of the width and length dimensions defined in Standard Drawings.
- B. Remove dirt, loose aggregate and other foreign material and follow manufacturer's recommendations for surface preparation.

### 3.2 APPLICATION

- A. Apply Pavement marking paint at the following Wet mil thickness requirements.
1. 20 – 25 wet mils for all markings.

**Example Calculation:** (Verify wet mil thickness)

$$\text{Wet Mils} = \frac{(0.133681 \text{ ft}^3/\text{gal}) * 12000 \text{ mil/ft}}{(X \text{ ft/gal})(Z \text{ ft})}$$

Where,

X = application rate. (Meter readings or dipping tanks).

Z = line width measured in feet.

12000 = conversion from ft to mil

0.133681 = conversion from gallons to cubic feet.

**For information only:** Approximate application rate for required mil thickness requirements.

1. 4 inch Solid Line: From 190 to 240 ft/gal
  2. 4 inch Broken Line: From 760 to 960 ft/gal
  3. 8 inch Solid Line: From 95 to 120 ft/gal
- B. Refer to Table I for pavement markings that are less than 20 wet mils in thickness.
- C. No additional payment for pavement markings placed in excess of 25 wet mils in thickness or exceeding dimensional requirements outlined in Article 3.1 paragraph A.
- D. Painted Legends and Symbols 1 gallon per 80 square feet. Provide Engineer calculations of legends and symbols for pay determination.
- E. Glass Sphere (Beads): Apply a minimum of 8 lbs/gal of paint, the full length and width of line and pavement markings.
1. Do not apply glass beads to contrast lines (black paint).
- F. Begin striping operations no later than 24 hours after ordered by the Engineer.
- G. At time of application apply lines and pavement markings only when the air and pavement temperature are:
1. 50 degrees F and rising for Acrylic Water Based Paint.
- H. Comply with Traffic Control Drawings.

### **3.3 CONTRACTOR QUALITY CONTROL**

- A. Application Rate: Verify that the paint and beads are being applied within specified tolerances prior to striping.
- B. Curing: Protect the markings until dry or cured. In the event that the uncured marking is damaged the marking will be reapplied and track marks left on the pavement will be removed at no additional cost to the Department.

### **3.4 REMOVE PAVEMENT MARKINGS**

- A. Use one of these removal methods:
  - 1. Grinding
  - 2. High pressure water spray
  - 3. Sand blasting
  - 4. Shot blasting.
- B. Do not eliminate or obscure existing striping, in lieu of removal, by covering with black paint or any other covering material.
- C. Use equipment specifically designed for removal of pavement marking material.

END OF SECTION

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 02842M**

**DELINEATORS**

**Delete Article 1.3, Paragraph C and replace with the following:**

- C.     ASTM A 1011: Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability

**Delete Article 2.1, Paragraph A and replace with the following:**

- A.     Supply and galvanize posts as specified. ASTM A 1011, and AASHTO M 111.



**SPECIAL PROVISION**

**PROJECT # BRF-0137(5)2**

**SECTION 02926S**

**INVASIVE WEED CONTROL**

**Add Section 02926:**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Controlling the spread of noxious weeds.

**1.2 DEFINITIONS**

- A. Noxious weeds subject to control are listed on the Utah State Noxious Weed List and the county's weed list that applies based on the project location. Refer to Article 3.3 of this Section for a list of the Utah State Noxious Weeds and the noxious weeds for each Utah county.

**1.3 PAYMENT PROCEDURES**

- A. Include payment for cleaning earthmoving construction equipment under mobilization.
- B. Pay for the control of invasive weeds using pre-emergent, selective, and non-selective herbicides by the unit area.

**1.4 QUALITY ASSURANCE**

- A. Regulatory Requirements:
  - 1. Follow all regulatory, application, and safety precautions listed by the herbicide manufacturer.
  - 2. Apply herbicides using only state licensed pesticide applicators.

**1.5 SEQUENCING**

- A. Clean all earth moving equipment before bring them on the project.

- B. Treat existing noxious weeds 10 days before starting earthwork operations.

## **PART 2 PRODUCTS**

### **2.1 HERBICIDE**

- A. Refer to Article 3.3 of this Section for a list of noxious weeds subject to control and the recommended herbicide for each species.
- B. Use commercially available herbicides specified to control weed species identified.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Use high-pressure water blasting or steam cleaning methods to clean all earthmoving construction equipment (scrapers, bulldozers, excavators, backhoes, trenchers) of dirt, mud and seed residue before initially entering the project.

### **3.2 EXAMINATION**

- A. Verify and locate all noxious weeds on the project. If assistance is needed for identification, contact the county weed control supervisor or UDOT's region landscape architect.

### **3.3 CONTROLLING INVASIVE WEEDS**

- A. Control invasive weeds. Use pre-emergent, selective, and non-selective herbicides as appropriate (See chart below). Apply herbicide as directed on the manufacturer's label.

B. Noxious Weed Table:

<b>Utah State Noxious Weeds</b>		
Common Name	Scientific Name	Herbicide
Bermudagrass*	<i>Cynodon dactylon</i>	glyphosate
Bindweed	<i>Convolvulus spp.</i>	Dicamba+2,4-d or picloram
Broad-leaved Peppergrass	<i>Lepidium latifolium</i>	metsulfuron or chlorsulfon
Canada Thistle	<i>Cirsium arvense</i>	2,4-D, dicamba, picloram
Diffuse Knapweed	<i>Centaurea diffusa</i>	2,4-D+dicamba or picloram or clopyralid
Dyers Woad	<i>Isatis tinctoria</i>	2,4-D+dicamba or chlorsulfuron
Perennial Sorghum spp (Johnsongrass)	<i>Sorghum halepense, Sorghum Alnum</i>	glyphosate
Leafy Spurge	<i>Euphorbia esula</i>	dicamba or picloram
Medusahead	<i>Taeniatherum caput-medusa</i>	glyphosate
Musk Thistle	<i>Carduus nutans</i>	2,4-D amine, metsulfuron or picloram
Purple Loosestrife	<i>Lythrum salicarial</i>	glyphosate (Rodeo Aquatic label)
Quackgrass	<i>Agropyron repens</i>	Glyphosate
Russian Knapweed	<i>Centaurea repens</i>	Picloram or clopyralid or chlorsulfuron
Scotch Thistle	<i>Onopordium acanthium</i>	2,4-D amine, metsulfuron or picloram
Spotted Knapweed	<i>Centaurea maculosa</i>	2,4-D+dicamba, picloram or clopyralid
Squarrose Knapweed	<i>Centaurea squarrosa</i>	Picloram
Whitetop	<i>Cardaria spp</i>	2,4-D+dicamba or chlorsulfuron
Yellow Starthistle	<i>Centaurea solstitialis</i>	picloram or clopyralid
*Do not consider Bermudagrass ( <i>Cynodon dactylon</i> ) a noxious weed in Washington County		
<b>County Noxious Weeds</b>		
<b>Cache County</b>		
Common Name	Scientific Name	Herbicide
Goatsrue	<i>Galega officinalis</i>	2,4-D+dicamba
Poison Hemlock	<i>Conium maculatum</i>	2,4-D+dicamba
Puncture Vine	<i>Tribulus terrestris</i>	2,4-D+dicamba

<b>Carbon County</b>		
Common Name	Scientific Name	Herbicide
Russian Olive	<i>Elaeagnus angustifolia</i>	2,4-D, dicamba, or glyphosate
<b>Davis County</b>		
Common Name	Scientific Name	Herbicide
Poison Hemlock	<i>Conium maculatum</i>	2,4-D+dicamba
Buffalobur	<i>Solanum rostratum</i>	2,4-D+dicamba
Yellow Nutsedge	<i>Cyperus esculentus</i>	glyphosate
<b>Duchesne County</b>		
Common Name	Scientific Name	Herbicide
Russian Olive	<i>Elaeagnus angustifolia</i>	2,4-D, dicamba, or glyphosate
<b>Grand County</b>		
Common Name	Scientific Name	Herbicide
Purple Loosestrife	<i>Lythrum salicarial</i>	glyphosate (Rodeo Aquatic label)
<b>Juab County</b>		
Common Name	Scientific Name	Herbicide
Water Hemlock	<i>Cicuta maculata</i>	2,4-D, or dicamba
<b>Kane County</b>		
Common Name	Scientific Name	Herbicide
Poison Hemlock	<i>Conium maculatum</i>	2,4-D+dicamba
<b>Rich County</b>		
Common Name	Scientific Name	Herbicide
Black Henbane	<i>Hyoscyamus niger</i>	2,4-D+metsulfuron
<b>San Juan County</b>		
Common Name	Scientific Name	Herbicide
Silverleaf Nightshade	<i>Solanum elaeagnifolium</i>	Imazapyr or glyphosate
Buffalobur	<i>Solanum rostratum</i>	2,4-D or dicamba
Whorled Milkweed	<i>Asclepias subverticillata</i>	2,4-D or dicamba
<b>Sanpete County</b>		
Common Name	Scientific Name	Herbicide
Houndstonge	<i>Cynoglossum officinale</i>	2,4-D or dicamba

<b>Uintah County</b>		
Common Name	Scientific Name	Herbicide
Russian Olive	<i>Elaeagnus angustifolia</i>	2,4-D, dicamba, or glyphosate
Purple Loosestrife	<i>Lythrum salicarial</i>	glyphosate (Rodeo Aquatic label)
<b>Washington County</b>		
Common Name	Scientific Name	Herbicide
Poison Milkweed	<i>Asclepias subverticillata</i>	2,4-D, or dicamba
<b>Weber County</b>		
Common Name	Scientific Name	Herbicide
Puncture Vine	<i>Tribulus terrestris</i>	2,4-D+dicamba
<b>Use rates:</b> Use rates for herbicides vary, follow the use rate on the LABEL for each herbicide		

END OF SECTION